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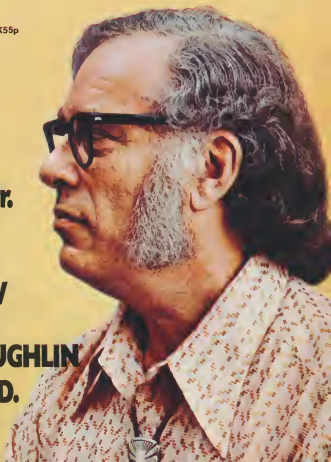
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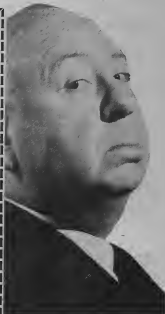
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I introduced myself in the first issue, but since you've all read it and come back for the second (you have, haven't you?) there's no need to go through that again.

Instead, let's consider the life-blood of this magazine—which happens to be the stories. And for the stories, we depend on you, the readers.

Yes, you.

There's a class of human beings called "science fiction writers." I assure you, I know this well. I'm one of them and I've been one for mumblety-mumble years, and we are all of us the finest people in the world.

However—and this is the crucial point—there isn't a single one of us who was born a science fiction writer. Every single one of us was a science fiction reader first. I was. I was a science fiction reader for nine years before I sold a science fiction story and became a science fiction writer.

Let's look at it from the other direction. Is it possible to be a science fiction reader without at least *wanting* to be a science fiction writer? Of course, when I say "science fiction reader," I don't mean someone who just watches a few *Star Trek* re-runs now and then, or who occasionally picks up an SF novel. —I mean someone for whom science fiction is a more or less steady diet, who subscribes to magazines, who combs the book and magazine racks, to whom the various authors are household names.

Like you!

Anyone who's that kind of reader *must* want to be a science fiction writer. I've been through that and I remember it well.

And you can *do* it, too. You can become a science fiction writer. You want to, don't you?

What's stopping you? Is it that it's hard?

Well, yes and no. Writing *good* science fiction is indeed hard for the beginner. Doing anything that requires a great deal of skill is hard for the beginner.

But just writing science fiction is easy. Forget the "good" part.



Just putting paper in the typewriter and banging out words on it till you've got a rotten science fiction story in front of you is a snap.

What's the point of writing a rotten story?

Ask yourself what's the point of taking general science in junior high school? What's the point of playing scales? What's the point of spring training?

Writing is a skill that must be learned, and that's how you learn.

You can read books about writing and listen to people lecture on how to write, and attend writer's conferences, and subscribe to writer's magazines, but none of that is going to make a writer out of you.

Only one thing ever invented has made a writer out of anybody. Writing!

It's the writing that teaches you. It's the rotten stories that make it possible for you to write the good stories eventually. Do you think the story I wrote at the age of eleven was any good? Of course not. I had to keep writing after that, on and off, for ten years before I could write "Nightfall."

Is that too long a time to struggle? Hell, it takes longer than that to learn to be a good surgeon, and being a good surgeon isn't nearly as exciting as being a good writer.

Of course, once you write your stories, your tendency will be to show them to your wife or husband, or your parents or children, or your teachers or neighbors. Don't do it. It's a waste of time. They'll all tell you the story is great and you'll be no further along at all.

You may also have the urge to send it to some favorite author and ask him to look it over and give you the few necessary hints that will make the story great. Don't do it. Authors are generally busy people who don't know how to deal with any stories but their own.

What's left? Easy. Send your stories to editors. If you have written a science fiction short story, send it to the editors of science fiction magazines. Send it to George Scithers, the Noble Editor of this magazine. He will even send you directions as to just what kind of science fiction we are looking for, if you write to him at Box 13116, Philadelphia PA 19101 and ask—and enclose a stamped, self-addressed envelope.

Are you afraid of rejections? Don't be. It's the common coin of response for all beginning writers, and editors send them out

without hostility or hatred, I assure you.

Some writers, of course, make a sale their first time out. Robert A. Heinlein did. If you're another Robert A. Heinlein, you may, too. If you're nothing more than another Isaac Asimov, however, then relax. I received twelve rejections before I made my first sale, and I received a lot of rejections after I made my first sale, and I occasionally get rejections even now.

Nobody likes rejections. I certainly never did, and when I get one nowadays, I hate it, but I just go on to write something else, and you should, too.

Besides, suppose you get enough rejections to paper your apartment. That will just make the triumph of the first sale all the sweeter. The intensity of triumph will be something those unlucky Heinleins who never get rejections will never feel.

So I'm urging all of you who feel like writing science fiction to do so, and to send the results to this magazine. —And why am I doing this? Wouldn't we like to have stories from the old tried and true professionals?

Sure we would, as many as possible. —But old writers die, old writers retire, old writers move on to other things, old writers can even grow weary and stale. We need new writers to infuse the field with fresh vigor, and to keep the old writers on their toes. (There's nothing that will keep you running harder than some rotten young kid pounding up behind you.)

And do we really want to receive all those rotten stories, almost all of which will be unreadable? Yes, we do, because George Scithers never knows when he'll pick up a manuscript by someone he never heard of and find he has a new Arthur C. Clarke, for instance—or finds someone who will be a new Clarke with a little grooming.

So get to work, please.

—Isaac Asimov

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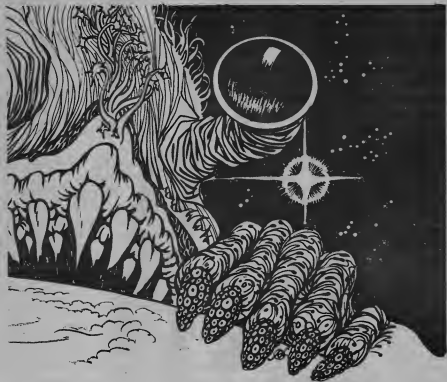
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LOW GRADE ORE

by Kevin O'Donnell, Jr.





The author was born 26 years ago in Cleveland, Ohio, where he grew up. He spent two years in Korea, one in Hong Kong, and one in Taipei. Like many writers, he's worked at a wide range of jobs: groundskeeping, teaching English, managing a dining hall, and various positions in a hospital. He now lives in New Haven with his wife, Lillian, where he is working on a novel along with his short stories—of which he's sold 19.

Nobody knew the teleport's name. Unless she'd come alone, her parents had also disappeared. Repeated appeals through the scratchy loudspeaker system had drawn no one willing to claim knowledge of her, much less a relationship. Perhaps they were peasants, fearful of reprisals if her identity were known.

By 14:49, the Director of the Calcutta Evaluation Center was answering the rapid-fire questions of fifty unruly newsmen. He spoke in English, probably to avoid accusations of regional favoritism. "Yes," he was saying, "we should be able to find it from her computer card, as we did on the three previous occasions, but—" He spread his dusky hands in dismay.

A cameraman from a local station lined his equipment up to frame the Director's pudgy figure with the ever-shifting colors of the Pukcip hologram.

"To the best of our admittedly limited knowledge, the child did present her card; the question now is, where has it gone? You must understand that immediately after she teleported to Pukci, at 13:46, there arose more commotion than the staff could cope with, yet—" as the photographer readied his video-tape camera, the Director, a political appointee, dried his forehead, "—I assure you, gentlemen, that as soon as conditions permit we shall cross-check all cards on file quite thoroughly, and—"

A little girl's desperate shriek froze everyone. The audience's attention shifted from the Director; he swayed visibly, as though brushed by a gust of wind. The camera whirled while its handler murmured clipped phrases of excitement into its microphone.

Between the straining reporters and the hologram stood the six-year-old whom the Pukcip screening had swallowed. Her hair was gone, shaved to the scalp; her dark skin was streaked and smeared with blood. She was naked except for wires that flapped from her wrists, her ankles, and her knobbly bald head.

They began to mutter. Was this what the Pukcip did to the children who precipitated out? Slowly, their hostility focused on the intermediary—

The child's second scream was ghastly in its inhumanity. It was the throat-tearing cry of a mortally wounded animal. Staggering towards them, she raised her tiny hands as though to beg their help.

A few in the front shook off their numbness, opened their arms, stepped—

Two Pukcip warriors materialized; the almost-saviors lurched back as if from a gout of flame. Each warrior held a gun in its

posterior hands; each trained one stalked eye on the startled newsmen. Their anterior hands reached for the girl. She dodged. They teleported to either side of her. One seized her arms; the other, her legs. The one whose kaleidoscopic carapace was more ornate dipped its eyestalks at the crowd that had begun to press forward. An instant later, all three—warriors and child, aliens and human—had vanished as though they'd never been.

The heavy silence of shock hung over the room for an awful minute, then burst into a monsoon rain of anger. The Director was its center. Bodies shoved; voices shouted. His mouth worked frantically, but futilely, against the frustration that mounted like a storm's static charge.

"Gentlemen, gentlemen, please, this is no—" His fat hands waved in vain. He was the lightning rod; their hatred, a rising surf, needed a rock on which to break. A fist beat against his face, and then another. He gave one strangled cry before his final, fatal inundation.

Even as the white-helmeted police were cracking enough black-haired skulls to disperse the mob, a bruised witness described the cameraman. Through channels hypersensitive to bad publicity flashed the order to suppress the tape.

The station manager surrendered it, though he protested that the government should not obscure the truth, not when a thousand hugely distorted rumors were flickering like cobra tongues through the Calcutta slums.

His superiors, apparently confident that tempers ignited by gossip needed hard fact to sustain their heat, ignored him.

They were wrong.

Calcutta burned.

A step ahead of the flames worked a score of foreign agents, laboring to discover just why the uneasy peace had been shattered. One "cultural attache" after another spoke to the survivors of the press conference; one government after another decided that it had to view the tape.

New Delhi, resisting their demands, insisted that it was a purely internal affair. In private and off the record, its distracted officials promised to distribute the tape once the civil disorders had ended.

Russian and American strategic analysts were skeptical. Oft-declared "states of emergency" had overprotected the Indian government from reality; it could not, they maintained, outlast an actual emergency.

Red phones buzzed; edgy leaders conferred. For once agreement came swiftly: they would force New Delhi, in the few remaining hours of its life, to relinquish the tape before it was buried under the wreckage of the regime.

The Indians were obdurate, at least until the fighters, scrambling off the carrier decks, made like a cloud of locusts for the sub-continent. The camel's back snapped; the tape was broadcast to the satellite network.

Televisions lit up policy rooms around the world; sweat dampened the shirts of the watchers. What if a teleport returned to Shanghai, or Los Angeles, or Rome? A tense, resentful public would lash out . . . possibly with the deep-gut fervor of Calcutta. Scrub as they might, the giant air machines couldn't filter out the stench of that fear.

Because if Calcutta was the rock, Wichita was the hard place.

On the afternoon of 23 June 1979, five hours after the then-President of the US surrendered to end the Two Minute War, the Pukcip had staged a demonstration on the Kansas plains. Their small expeditionary force had slammed into Wichita with more fury than any tornado had ever unleashed; their grim sweep missed but four of the town's three hundred thousand residents. The rest lay rotting in the corn-growers' sun.

When it was over, their Commander had pre-empted the nation's communication networks. As cameras inched over the dark stains on the carapace he'd refused to cleanse, he said through his interpreter: "You see now our seriousness. Do as you are told, and all will be well. Oppose us even lightly, and a larger city will suffer the same fate."

Like a dynamite blast in a coal mine, Wichita crumbled America's solidity. While the last twitches of the President's feet were reflected in the gleaming tiles of a White House bathroom, politician after politician hurried to add his frightened constituency to the swelling list of those that would follow orders. By midnight the country had committed itself to cooperation.

Two years had passed since the headlines, the half-masted flags, the muffled drumbeats on Pennsylvania Avenue. The impact had yet to fade. The annual tribute of four or five widely separated children was clearly the lesser evil. They went so quickly, so completely . . . they left no bones to be washed by the summer rains . . . one could almost pretend that they, and the Pukcip, had never existed.

The alien presence on Earth was nearly invisible: a small em-

bassy at the United Nations, regular equipment deliveries to the many Evaluation Centers, and an occasional spot-check of children reported to have been tested. Scientists were prohibited from examining them; even diplomats met them only at lengthy intervals.

They were strangers, and clever conquerors. Importing no overlords, advisors, or enforcers, they presented no targets. Like Mafiosi handing their victim a shovel, they made Terrans do the work. Any rebellion would have to attack the governments that traded a few children's futures for many citizens' lives.

Any successful rebel would have to raze the Centers, would have to cut off the steady trickle of teleports to Pukci.

Any such interruption would invite Pukcip retaliation on a scale that would dwarf Wichita and utterly discredit the rebels.

The options seemed stark to most leaders: they could protect escaping teleports, and be punished; or they could do nothing, be overthrown, and then watch their populaces be savaged.

In the gray light of dawn, with the sun only a band of pink promise on the horizon, the President reached his decision. America would continue to cooperate with the Pukcip—up to a point. However, any returning children would find armed troops eager to defend them.

The men at the Cabinet meeting saw him hammer his fist on the long table, felt his agony of soul as though it were theirs, and shared his determination when he vowed: "No kid of ours goes to Pukci twice! Send in the Army."

§ § §

Colonel Mark Hazard Olsen, spine straight as a pine from his native Vermont, meditated in the passenger seat of the Jeep. The wind, the smooth humming roar of the motor, the dawn-dappled rows of abandoned buildings, were all locked out of his thoughts. His entire being sought serenity.

Yet the housefly flitting of Pukcip warriors refused to respect the pattern and the peace of his mantra. He forced himself to persevere, but after a few minutes more opened his eyes. Maybe later, once the bright plating of his hunger had been corroded by hours of forced alertness, he could try again.

At the moment, all he wanted to do was kill a few Pukcip.

Olsen had been a major during the Two Minute War. When the Pukcip squad had wink-blinked onto his post, he'd been dictating a new page for the MP training manual. Scattered shots had drawn him to the window.

His uncomprehending blue eyes had seen the bright shells of the Pukcip, had seen the running, falling, sprawling blurs of khaki. More shots: a pitifully few steady growls punctuated by flurries of single cracks that seemed always to end in astonished screams of pain.

Hanging out the open window, he'd watched his men race for the armory, where all the weapons except the guards' were kept under lock and key. The first to emerge had taken cover, were waiting for the enemy to come carelessly into range. There! The machine gun roared, its tracers leaping out to the—but the foe was already gone, had already shielded itself inside a squad of stunned GI's.

"NO GRENADES!" he'd shouted. "NO GRENADES!" The din was too great for his order to be audible, but his men didn't need it. They wouldn't hurl indiscriminating death into their own ranks, not even to kill the commingling aliens.

The phone had rung; an enraged General had had to scream, "Surrender, you damn fool!" four times before its import had sunk in. A word to his secretary, a frantic realignment of intercom switches, and his hollow voice, pregnant with feedback squeal, had echoed through the firefights.

Afterwards the clean-up, as integral a part of modern warfare as hot turkey on Thanksgiving, or cold beer on the Fourth. Three hundred GI's lay dead and dying; another five hundred were wounded. In the pools of blood, under the half-wrecked armory, were found four bullet-riddled shells. The Pukcip, as contemptuous of their own dead as of the human living, had left them behind.

Olsen, after wondering what to do with them, had decided to ship them to a nearby university. He'd taken the alien weapons—the post had specialists who could say if they deserved detailed study—and then ordered a dozen sullen GI's to load the death-dulled shells onto a van.

Before the van had cleared the gate, the news of Wichita had crackled through every radio on the post. The GI's, without communication or negotiation, responded to the same instincts. They'd parked the van on the parade ground.

Gasoline burns hot and quick; Pukcip horn merely chars. The billows of black smoke had drawn the survivors, who'd contributed wood, and more gas, and phosphorus grenades. A wasp-bitter helicopter had offered a load of napalm. And through it all the men had stood, helpless rage under the dirty sweat of their

empty-eyed faces. Among them was Mark Hazard Olsen, who'd waited till the last crisp curl of carapace had folded upon itself to give the order for bulldozed burial.

By then he'd been informed that his was one of the three US posts assaulted by the invaders. There had been no tactical or strategic reason for the attack—the motive had been psychological. Deliberately flaunting their ability to rain chaos on any defensive installation, the Pukcip had hoped to demoralize the military.

Their ploy had failed. Olsen had already started to work out tactics for the next engagement, tactics—the convoy jolted to a stop amid the potholes of a long-neglected parking lot; he dismounted and surveyed the old, two-story school building—which would be invaluable if the Pukcip came to Hartford.

§ § §

Ten minutes later, Walter F. Dortkowski, Director of the Hartford Evaluation Center, groaned aloud. The blacktop lawn of the commandeered school was littered with Jeeps, deuce-and-a-half's, and milling squads of soldiers. Cursing, he rammed his battered Volvo into his reserved space. Things weren't red-taped enough, they had to saddle him with the Army, too.

As he switched off the ignition, he brightened. Maybe the Governor, finally keeping her promise, had convinced the Army to take over. Maybe he could throw away his plasticized ID badge, break his clipboard over his knee, and go home a free man. God knew he'd tried to resign often enough before.

In July of 1979, when the Governor had named him Director, he'd accepted the appointment for two reasons, and on one condition. The condition had been that he'd step down within six months.

The reasons had been almost classically simple: first, a very important job had to be done with a minimum of time, money, and effort. Dortkowski, who had earned his MBA at Columbia before finding the fascination of educational administration, had realized—had been sweet-talked into realizing—that he could establish a better Center than any one else under consideration. The stakes had been too high for his hatred of the Pukcip to interfere. He'd felt—he'd been urged to feel—a responsibility to the public.

Then, once he'd truly understood—had been made to understand—how he could guarantee the safety of three and a half million people, the Governor had pulled out the plum: after six months of designing, implementing, and refining the evalua-

tion system, he'd be named State Commissioner of Education. It would have been a wonderful 45th birthday present.

But difficulties arose. January, 1980: the administration could find no qualified successor, could he hold on for a few months more? Yes, he could. April, 1980: The Commissionership received too much exposure to be held by someone who symbolized Pukcip oppression; they'd find him another slot, but in the meantime . . . and the meantime became all the time, and the bars of inertia, animosity, and indispensability had grown around him like bamboo.

At last, I'm quitting! he'd declared, to the deputies and assistants and administrators who'd hemmed him in. He'd continued to say it; in the end, even to the Governor herself.

Warm sympathy had flowed across her face. Sadly, she'd told him she was sorry, she couldn't let him quit. She needed him too badly. And if he did just walk away from it, as he'd threatened to do, she personally had it in her power to make sure that he. Never. Worked. Anywhere. At anything. Again. And in her face had glittered the eyes of a krait.

So he'd stayed, despite the vociferous hatred of people he'd never met, despite the pleas of his ostracized family. He'd stayed because he had no choice, because the Directorship—carriion-strewn plateau that it was—was his only pathway to the peak, and if he ever climbed down from it, they'd never let him near the mountain again.

Now, for the first time in months, a smile disturbed his sunken cheeks. Adjusting his tie, checking his frizzy gray hair in the rear-view mirror, he stepped into the early sun. Already the day felt hot. A shirtsleeve day. His small, neatly shod feet were light as he walked expectantly to the door. If he could transfer power quickly, he might have time for his fishing rod.

He might even get away before the first child arrived.

§ § §

Someone was shaking Jonathan's shoulder. It was his daddy, telling him to get up. He pushed his heavy eyelids open, but it was still dark. That meant it was going to rain a lot, 'less it was real early. Gradually, he remembered. Today he'd be 'valuated.

"You 'wake, boy?" gruffed his daddy.

"Yowp." It was true, too. He sat up, feeling alive and excited all over. "How soon we leaving, Daddy?"

"Soon's your mama fix us some breakfast. Get dressed, now."

"Okay, I be quick." He slid out from under the much-mended

sheet, and started grabbing for the clothes his mama had laid out on his dresser. "I be real quick, Daddy. Don't wanna be late for my 'valuation." As he pulled on his underwear, he puzzled over his daddy's wordless turn and hasty exit.

§ § §

Dortkowski stared into Olsen's face. Long and lean, dark from years of weather, lined by innumerable hard decisions, it was utterly impassive. Only two things hinted at the Colonel's feelings: the grinding of his teeth on the burnt-out stub of a cigar, and the ambiguous softness in his clear blue eyes.

"Sorry as hell to give you the wrong impression, Mr. Dortkowski," Olsen was saying. "We're here for one reason, and one reason only: to protect any kid who happens to come back from Pukci. We'll give you any assistance we can, but . . . we're not going to run your operation."

"It's my fault, Colonel." The words were very hard to get out. To be trapped in reality's field after free-falling through fantasy like a wide-eyed child . . . a glider pilot must feel the same, when he's lost the thermals and the ground is rushing up at him. "Thanks for, uh, letting me down easy."

He turned away. Hands behind his back, shoulders slumped, he entered the I-shaped school building. The place would consume him yet. Already it had cost him his friends, his reputation as a concerned administrator . . . what next? His wife? His life? Olsen had said his Calcutta counterpart had been torn to pieces by an enraged mob. That might be better. One white-hot moment of pure, unmasked hatred—despite the agonies of dying—might be preferable to years of uncomfortable silences, of embarrassed breakings-off.

Hand kneading his belly, where the ulcer had awakened with its usual rumbling torment, he trudged down the stem of the I. As he did every morning, he paused by the door that led to the memory-wiping machinery. That had earned him more abuse than anything else.

The test could be invalidated if the children knew what to expect, so the Pukcip had designed equipment to keep the already-screened from describing it to the untested. There had yet to be a single adverse reaction to the erasing—if nothing else, the Pukcip were unparalleled in neuroelectronics—but every mother despised him for exposing her child's mind to a callous alien machine.

The dials glittered in the slanting sunlight. If only the scales were larger; if only the gauges measured months instead of



minutes . . . to go in, to strip his brain of its experience, to tear from it the skills that made him indispensable to the political establishment . . . they'd have to let him resign, then. They'd have no use for a seventeen-year-old mind in a forty-six-year-old body . . .

He unlocked the door to his office. The small cubicle smelled of arguments and dust, of hysteria and decay. He forced a swollen window up six inches, as high as it would go. Rubbing the neck muscle that had protested the exertion, he dropped into the chair behind his desk.

On the blotter lay a computer printout naming the 250 children who would pass through the building that day. The coldly efficient type face hit him like a slap in the face. Lowering his head to his crossed arms, he wished he could be as pragmatic about it as the Colonel was.

§ § §

Olsen was stationing his men just outside the projection room. His blue eyes, as if belying Dortkowski's assessment, held real anger whenever they glanced through the next doorway.

"They were too slow in Calcutta," he was telling his lieutenant. "They gawked like raw recruits while the Puks took the kid back. I won't put up with that kind of horseshit. The odds are against its happening here—that was Calcutta's third or fourth teleport, and this Center hasn't even had one yet—but if it does, so help me God, you'll either save the child or face a firing squad." He removed his cigar and spat out a shred of tobacco for emphasis. "Do I make myself clear?"

"Perfectly, sir." The lieutenant was relaxed but watchful: he knew Olsen prized performance above all else. "Are there any limitations on what weapons we may use, sir?"

Olsen studied the dingy anteroom before replying. A touch of claustrophobia flicked him from a distance, warned him of the oppressiveness it could bring to bear.

The ceiling sagged in the middle; any significant explosion would bring it down on everyone's head. "No grenades." Even a firefight would weaken it, perhaps disastrously. "Sidearms and M-16's only." He'd have to risk it, no matter what memories it teased into life.

In 'Nam once, during his first tour on the Delta, he'd led a company of men into a subterranean VC arms cache. An observer silent in a treetop had pressed the button of a small radio transmitter; the plastique had gone up and the tunnel roof had come down. The memory of muffled screams, of tattered fingernails clawing at soggy earth, still haunted Olsen.

But now it had competition: the tape he'd seen over closed-circuit tv that morning would stalk his dreams for months to come.

"There's one advantage to this kind of confined space," he said to his lieutenant. "They won't be able to ride their carousel."

Films of the Two Minute War had revealed distinct patterns—predictable patterns—in the Pukcip style of skirmishing. Each warrior moved through a standard series of positions, a series as immutable as an 18th Century waltz. To defeat them on the battlefield, a foe had merely to determine each warrior's starting point, and fire there a fraction of a second before the Pukcip was due to materialize.

That called for a special soldier: one who could make sense of the shifting, surging intermingling of gaudy shells and faded khaki; one who could synchronize his trigger squeezes with the rhythm of their maneuvers; one who could stand fast even when a Pukcip blinked into the space next to him.

Olsen had asked for permission to select and train an elite detachment of such soldiers. Civilian eyebrows had lifted—there was no future, they thought, in preparing to fight an enemy that could depopulate a continent if it chose—but the political pressure to develop contingency plans had meshed with the Pentagon's desire for revenge. He had received his colonelcy.

"Two last things," Olsen said, staring at the cracked plaster of the anteroom walls. "First, make sure you rotate your men, keep

'em fresh. Those idiots in Calcutta were probably asleep on their feet."

"Consider it done, sir."

"Second, if a kid shows up, aim above his head and hose the room. That should catch the Puks by surprise, and leave 'em no place to jump except back home. All right?"

"Yes, sir."

"Carry on." The far doorway called him. Scowling, he crossed to it, and scanned the holographic projection of the—reception room? laboratory? zoo?—on Pukci. All shimmers of swirling blues and purples, it stood in haughty contrast to the peeling green paint of the Center. Olsen glared at the metallic glints in the odd-shaped tiles of its floor, as if he could dissolve the deception through sheer force of will. The vivid image remained unaltered. The Pukcip equipment was too good.

Spurred by an impulse as inexplicable as fate, he stepped forward. The lieutenant's surprised gasp plucked at his shoulder, but he didn't respond. He had no time. Gravity grasped him, ripped him through the planes of colored light. An instant later, he was bouncing softly on the nylon mesh strung beneath the doorway.

Damn effective, he thought. If I hadn't known—if I'd been a trusting six year-old—I'd have expected it to be solid. Shit, even knowing, I was startled.

A child's world is tinged with the mysterious and the irrational. To him, fantasy is merely fact in which he can not participate. What looks like a room must be a room, if he can enter it.

Two hundred fifty children ran, skipped, hopped, or walked into the Pukcip projection every day. Passage over the threshold triggered the test which, for one uncaring nanosecond, pitted the law of gravity against the child's belief that he was in a room whose floor could support his weight. If reality won, the testee tumbled; if faith overrode it to write its own version of natural law, the child either levitated in blissful ignorance . . . or teleported directly to the original room, somewhere on Pukci.

Roughly eleven of every million testees had faith enough to warp reality.

§ § §

Jonathan was in the front seat, between his mama and his daddy. He'd wanted to ride in the back—both his parents were pretty big, and there wasn't much room. They'd told him that just that once they wanted to be together. It was sort of nice to be able to lean against his mama's softness, but there wasn't any air. If

he were sitting where he always sat, the wind would be buffeting his face, and he'd have to half-close his eyes, which made the whole world look different.

"Is it long time, Daddy?" he asked.

"Most an hour, boy." He took his eyes off the road and gazed down at his only son. "Don't be in such a hurry, y'hear? We gonna get there, we just gonna have to sit and wait till they ready for us anyhow."

Jonathan nodded solemnly. He'd been wanting to ask his daddy why he was driving so much slower than usual.

§ § §

The stone floor was worn; Olsen's combat boots set up a hollow ringing. The old school building had, at that hour of the morning, the semi-deserted air of a shut-down refinery. It was hard to believe how crowded the empty corridors would become; harder still to think how many people had passed through them in either of the building's two lifetimes, ironic that each involved some sort of screening.

The silence was almost good. Dortkowski's crew would shatter it within the next half hour, but the first children weren't due till nine o'clock, more than an hour away. That would be time enough to look things over, to smooth out the jangle of his thoughts. It bothered him that he would have to stand idle while the Pukcip equipment assayed the value of two hundred fifty children.

He left-faced into the main wing. Rickety metal folding chairs lined the walls; he repositioned one that had wandered out a few feet. A stencil on the seat's underside declared it to be the property of a local funeral home. Disgusted, he kicked it. The impact chipped paint off the crumbly cinderblocks; quarter-sized flakes of green skittered down to the baseboard.

Damn the Pukcip for their ability to teleport. And damn the civilians for being so easily cowed! The Army could have taken them, once it had recovered from the initial shock. Their weapons weren't very good, no matter what the hysterical media claimed, and the carouselling warriors took longer to aim than a GI did. If their tiny expeditionary force hadn't held most of the government hostage...

The fact that every other officer in the world had succumbed to the same ruse didn't lessen the shame. If anything, it heightened it. A professional respects his opposite numbers, often to the point of judging himself by his perception of how well he could do against them. When not a single human officer proves himself

capable of beating off a handful of stalk-eyed child thieves . . .

Only revenge could remove the stigma. But the Pukcip were immune—Earth neither knew where Pukci was, nor had the star drive to get troops there. In a year or two, though . . .

The US and the USSR were co-developing a faster-than-light drive. If it were possible, if it weren't a mirage hanging stubbornly above the horizon, they'd launch a grim fleet and ransack space for Pukci. Fueled by a bitterness that wouldn't fade with the generations, they'd find it, and avenge Wichita, Lyons, Serpukhov, all the other demonstration cities . . . the Pukcip warriors could dance quadrilles on the asteroids, but their planet wouldn't be able to dodge the swollen tips of the nuclear missiles.

One fear dogged Olsen, as it did everyone who hungered for satisfaction: if an FTL drive could be invented, why were the Pukcip allowing work on it to continue?

If it couldn't be invented, why had the joint communique announcing the project provoked the invasion?

It was obvious, in the crystallized brilliance of hindsight, that the Pukcip had spied on Earth for years. They'd done nothing to reveal themselves until the release of the joint communique, but within twelve hours of that first, hope-stirring news flash, the four-armed teleports had stormed the world.

Olsen had his own theory: that the Pukcip theoreticians had decided FTL *travel* was impossible, but that research into it would somehow uncover natural teleports. So the Pukcip warriors, as edgily suspicious as military men anywhere, had opted to remove Earth's teleports before they could spearhead an invasion of Pukci.

That fit neatly with the intelligence analysis that only the enemy's soldiers could teleport. If, in their culture, the power had purely military applications, their experts would naturally have decided that Earth would also exploit it for war.

They were afraid, Olsen thought They knew that once we started roaming the stars, we'd find them . . . shit, and I thought we were xenophobic. Or maybe they know how xenophobic we are, and figured they'd eliminate our space capability before we'd discovered we had it . . . or maybe their motive is completely different—like they wanted to maximize the return on their investment, and so they held off while our population grew, until it seemed that we were ready to find, and use, the raw materials they needed . . . he gave up the effort at triple-think with a tired shake of his head. The *why* of the situation didn't really matter, not to him. The

specialists could worry about it.

His job was to be ready to fight them.

His hope was that he'd get the chance.

§ § §

Dortkowski lifted his clipboard, recorded the Center's need for more Pukcip ink, and looked the room over one more time. Everything seemed to be ready for the children. The question was, would he be ready for the parents?

He'd explained it ten thousand times himself; he'd had every newspaper in the state run articles on it; he'd even scraped together the funds for a brochure distributed at the door. But still they screamed their outrage when they saw the tricolored tattoo on their children's wrists.

What could he say that he hadn't said before? Clearly the best thing was simply to start up the mental tape recorder, let the tired neutral words fall as they had so often before, and then wear the stoic face while spittle splattered his cheeks.

The Pukcip wanted their slag heaps labeled. What else could he say? To tell a mother that her child likes something she doesn't is to incite the hurricane; to tell a father that the process is painless is to ignore the very real hurt he feels at his child's disfigurement.

The bureaucrat had but one defense: *I'm sorry, it's not my idea, I didn't make that rule, if it were up to me I wouldn't, I can't make an exception, I'm sorry, but I'm just following orders.* His ulcer pinched, as if to extend the range of his soul pain. It was a lousy defense and he knew it. The fact that every word was true made him no happier.

What the parents couldn't understand was what he didn't dare forget: any deviation from the Pukcip procedures might be discovered in one of the irregular Pukcip spotchecks. Such a discovery could condemn an entire city.

The headache was starting up again; his ink-stained fingers massaged the bulging vein in his temple. It was going to be one of those days . . . but maybe he'd get lucky. Maybe a parent would get infuriated enough to put him into the hospital.

Immediately he sighed. That was wishful thinking. There was always an aide, a cop, *somebody* to step in officiously and protect him from the lesser suffering. Why would no one do it for the greater?

His hands groped for the center drawer of his desk; warped wood screeched as he pulled it out. It overflowed with the debris

of bureaucracy: forms, stamp pads, pencils . . . brushing them to one side, he uncovered the small green bottle. He shook it. The lethal white pills rattled like castanets.

They were his ticket out. If the Center uncovered a teleport—no, *when* it did, because eventually it had to—he'd screw off the top, tilt back the bottle, and empty dusty release down his throat . . . because it would have been his fault. Without his administrative expertise, it never would have happened . . . and he could see no other means of atonement.

Then he laughed, sourly, and the acid bit at the back of his throat. Atonement? He knew himself better. It was escape, the modern man's escape: swallow the pills and dodge the pain. Let chemistry exorcise reality. Let death deny his responsibility for losing a child to the Pukcip pipeline.

§ § §

They were driving straight at the sun, and if it didn't rise up off the end of the road before they got there, they were going to have a whole lot of trouble getting to his 'valuation.

Jonathan squirmed around so the bright streaks wouldn't be flying into his eyes. Catching his mama looking down at him, he asked the question that had been floating around in his head for the last couple days. "Mama, why they wanna 'value me for anyway?"

"They doing it to all the little children, honey."

"But how come they want *me*, Mama?"

"Cause the government say you gotta."

"Oh." He considered that for a moment, then shrugged. If his daddy listened to the government, whoever that was, he guessed he'd better, too. Sure didn't sound like his mama liked that guy, though. Her voice had done the same thing to "government" that it always did to "landlord."

§ § §

Olsen strode through a classroom to a window above the parking lot. The April day was going to be hot; a tang of soft asphalt was beginning to permeate the air. Below, the unseasonably cruel sun tormented a cluster of anxious parents. They probably hadn't slept all night. Unable to stand the suspense, they'd come early, to get it over with quickly. Poor bastards. Their faces were as gray as Dortkowski's hair.

The odds were against any of them losing a kid—from the initial statistics, only one in a million could teleport—in fact, they were ten times more likely to go home with a levitator. Still, the

possibility that their child might wind up a nugget in a Pukcip pocket was enough to make most of them despair.

Leaning on the dusty windowsill, he clenched his teeth. He had a boy of his own—Ralph, four years old, now. In less than two years' time he'd be shuffling through the corridors of a Center much like this, one more big-eyed kid in a line that stretched all the way back to the world's maternity wards. As a father, he knew that the most nerve-wracking aspect was that if your kid should go to Pukci, you'd never know what they did to him.

Not that Calcutta wasn't giving him some very nasty ideas.

He couldn't decide whether he should tell Grace about the video-tape. If one of the networks was leaked a copy, of course, he wouldn't have to, but if its icy horror kept it off the air . . . *could* he tell her?

No. From a comment or two dropped into her conversations, he knew she was expecting him to find and pull the string that would exempt Ralph. He'd explained, more than once, that there was no such string—that even the President's grandson had endured the evaluation—but she behaved as though she'd never heard him.

It was either acute tunnel vision—she saw what she wanted to see, and no more—or she had a very touching faith in him.

Straightening, brushing the dust off his hands, Olsen gazed into the sky. He wouldn't tell her. There was always the random factor to consider—why make her fret for two years if there was even the slightest chance that the armies of Earth could hurl themselves against the Pukcip warriors?

If it didn't happen, she'd wax hysterical while Ralph was being tested, but once he came through alive she'd calm down.

If it did happen . . . either the Centers would be leveled by jubilant wrecking crews; or there'd be no citizens to fill their halls.

§ § §

"We here," his daddy grunted. "Looks like they just opening the doors."

"Jonathan, child—" suddenly his mama turned sideways, and her soft round eyes practically swallowed up his own "—you gonna be all right, honey, y'hear?"

"Yowp." His head bobbed up and down, till he twisted to see his daddy, who cleared his throat with embarrassing loudness. "You all right, Daddy?"

"Just fine, boy." He pushed his door open, but before he threw his long legs into the parking lot, he gave Jonathan his hand. "Do

what they tell you, boy, and everything's gonna be okay." Jonathan didn't say anything. He was too busy wondering what they were so nervous about.

§ § §

Olsen stood by the door to the anteroom, eyes restless, muscles panther-loose. Facing him was Dortkowski, thin frame draped in a soft white lab coat. Behind him was the Specialist 5th Class who ran the communications gear. It was a mild reassurance to know that if anything happened, the entire chain of command would hear of it within seconds. It was less reassuring to recall that the Calcutta guards had had exactly seven seconds in which to react.

He glanced at Dortkowski, whose bony hand was massaging his stomach. Evidently the tension was gnawing at the Director. It was understandable: the children came so slowly; the parents hovered so watchfully. From the other's impatient checking of his watch, Olsen guessed that they'd fallen behind schedule. Any further delays would probably drive Dortkowski into a nervous fit.

The short, shabby corridor seemed to quiver with an air of expectancy. Everyone was uptight, jerking about at the slightest noise, as if convinced that It was going to happen. Eventually, of course, It would. The only question was when.

Dortkowski's statistics were no help. They said one in a million, but refused to say which of those million it would be. He'd have to imitate the bureaucrat: test them all, hold his breath on each, and—if he was there long enough—swig the Maalox after every five or six. Olsen knew, with a pawn's despair, that even when they lost one, he wouldn't be able to relax. Though there would be only two in two million, they could come consecutively.

He wondered what was in Dortkowski's other pocket, the one he patted every few minutes. It wasn't ulcer medicine. The outlined bottle was too small.

Fighting back the temptation to pace, he leaned against the wall. He had to be near enough to hear the voice patterns echo through the anteroom.

First the flare of fright as the child fell, then a gasp, then bewilderment rushing to the brink of tears. If the costumed clown by the safety net caught the kid's attention quickly, the thin, confused voice would switch to giggles in mid-sob. If not, they had to hold everything until the child was safely inside, out of earshot of the next testee.

A little black boy was walking towards him. All dressed up,

with his shoes shined and his hair in a neat Afro, he looked scared. He was probably getting too much attention. All the adults were eyeing him, and their expressions would be hard for a kid to read. But his jaw was set, and he put one foot in front of the other with praiseworthy determination.

Dortkowski smiled down at the boy, which seemed to help a little, and one of the black soldiers winked. His voice was still tiny, though, when he said his name was Jonathan. Yes, sir; he'd go into the next room and wait.

Olsen watched his small back pass through the rainbow doorway. As he braced himself for the cry of betrayal, his back tingled. The boy was too quiet. The air smelled . . . odd, and its pressure seemed to have dropped.

Barely noticing the green bottle in Dortkowski's hand, he looked. Jonathan was standing on glistening tiles, apparently inspecting the spacious room. Doors opened in the shiny walls; Olsen saw Pukcip heads come around the edges. The boy sat down and started to sob.

Dortkowski gave a sound, almost a whimper, of relief, and sagged against him, murmuring, "It's a levita—"

But Olsen shouted, "Hell with that, it's a space warp! Get in there, you bastards, *get in there and take that place!!!*"

Within seconds, his and other booted feet were skidding across Pukcip stone; back in Hartford, his Spec 5 was demanding rein-



forcements for the bridgehead; and Olsen, automatic in hand, was cradling the terrified boy.

§ § §

Jonathan was frantic to know what he'd done wrong. After all, they'd *told* him to go into the room, even though they must have known how far away it was. It was very confusing. If they knew he couldn't go there, why did they get so excited when he brought there here?"

§ § §

With almost clinical dispassion, Dortkowski watched his skinny fingers tighten the cap on the bottle. He'd come *that* close. He almost hadn't had the courage to look. If Olsen's uncompromising eyes hadn't swept over him . . .

They should have guessed. When the test provoked two different paranormal reactions, one less common than the other, they should have guessed that it might provoke a third, even more rare. This boy, neither levitator nor teleport, was something else entirely: a talent capable of wedding Earth to Pukcip via another dimension, and of keeping them joined, perhaps indefinitely. Continued testing might eventually have uncovered a fourth kind of power . . . but he didn't have time for that, not now.

Though the halls were a blur, he knew he should clear them for the Army. He walked up to the crowd of parents and children, spread his arms, said, "That's all, folks, it's all over, go on home, there won't be any more evaluations."

And the tears on his cheeks made his smile more profound.

§ § §

The war was short, and perhaps more savage than it should have been, but no one knew how long Jonathan could hold open the doorway. Besides, the once humbled generals wanted an unconditional surrender, and quick. And more than a few of the infantrymen had had friends or relatives in Wichita.

The Pukcip contributed heavily to their own defeat. Most of their tiny army was elsewhere, and had to be recalled. By the time it was ready to skirmish, a thousand Gr's had spread throughout the neighborhood. The entire 82nd Airborne was in position before the aliens had deduced the existence, and the location, of the doorway. Their assault on it ran headlong into Olsen's special forces, and was repulsed with heavy casualties.

Furious, humiliated, and totally unaccustomed to defensive warfare, the Pukcip wasted the little strength they had. They launched a dozen vindictive raids on Terran cities, and lost sol-

diers in each. Then, before their errorism could take effect, their panic-stricken government called them home. Ordered to destroy the invaders, they tried—but pent-up hatred and sheer numbers more than cancelled their carouselling multiplicity. With the arrival of the 101st Airborne, the battles tapered into sniper attacks, and those into silence.

If they'd reacted less emotionally—if they'd had any experiences with invasions—if they'd studied Russian or Chinese military history... but they hadn't, so the war was short. And perhaps more savage than it should have been.

The Army took two sets of documents from Pukcip archives before closing the doorway on chaos.

The first included blueprints for a functioning starship.

The second included invoices for FTL drive units sold to the shipyards on Rigel VI. Each unit was identified by its city of origin. Four had come from Calcutta.

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LOST ON CAPRA

by Martin Gardner.

Mr. Gardner's most recent book is The Incredible Dr. Matrix; here's his latest SF puzzle for us.

Dr. Ziege, the eminent German extraterrestrial geologist, was the first human to set foot on Capra, the fifth planet from the star Capella. For several months she and her two companions explored the planet by spacecar.

Capra is roughly twice the size of the earth, but lacking in enough water to support life. Dr. Ziege found the planet a barren, sandy waste, its surface as smooth as the plains of Kansas. Like the earth, Capra rotates on an axis. Dr. Ziege designated one pole north and the other south in conformity with the ship's magnetic compass and the planet's earthlike magnetic field. Geographic and magnetic Caprian poles coincide.

The last radio message from Dr. Ziege was: "We have lost our bearings and cannot find the spaceship. Yesterday we drove 10 myriameters due south from our last camp site, then 10 myriameters due east, then 10 myriameters due north. We find ourselves back at the camp site. Food supplies exhausted. Send help."

Attempts to reach Dr. Ziege for precise information as to her location brought no response. The German government immediately fired a rescue ship through Wheeler wormhole 124C41+. Two days later it was circling Capra with plans to land near the north pole. It seemed obvious that only from that pole could Dr. Ziege and her men go 10 myriameters south, then east, then north and be back at the starting spot. But there were no signs of the explorers within a radius of 20 myriameters from the north pole.

"Ach!" shouted Felix, striking his temples. "We are looking in the wrong place. *Another* spot fits Dr. Ziege's message perfectly."

"How can that be?" said Hilda. "If the starting spot is a few kilometers from the north pole, the terminal spot will miss the pole by a short distance. The farther south you go, the more it misses. At the equator it misses the starting spot by a full ten myriameters. And south of the equator it will miss by more than that!"

Nevertheless Felix was right. Where should they look next? See page 48 for the answer.

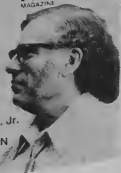
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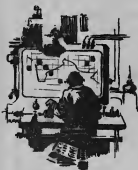
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HERO

by J. P. Boyd



Now, there are three SF writers named Boyd: John, Waldo, and J. P., who here makes his first professional sale. Dr.

Boyd is a dynamical meteorologist working on stratospheric waves, tornadoes, and numerical methods for their study.

He played varsity basketball in high school (6' 3½"), has been writing since he was 10, and is now 25. We are working on him to let us see more stories with the setting of this one; it's a planet with an atmosphere that makes dirigibles far more practical than they have been on our own Earth.

The airship floated serenely a few kilometers above the Arashim Sea. In the bay window, the blue-green sky of the planet Eahonua was darkening into twilight. As Glenn greased the skillet, the video flashed into light; in a few minutes, *Star Rangers* would crowd the lounge with fans. Looking over the bar, he saw John Markham pick up a magazine and drop onto the sofa.

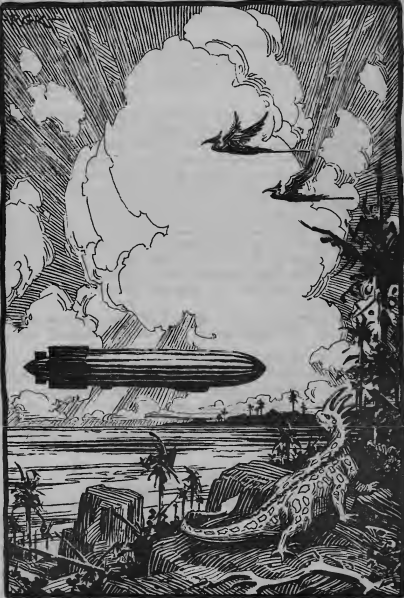
"How's the tornado business, John?"

"Fair to middlin'. I've done about all the analysis I can do on the Tharsis Island films."

"So you need another funnel."

John nodded without looking up. "It's been great, though, to actually photograph a waterspout from above. Krisnia, Wend, and I have made lots of films from our plane off the Trinian keys below cloud base and taken pictures of whirlwinds in the desert, but to see the hole form in the clouds and to have cloud tags to use as velocity tracers long before the visible funnel starts poking down below the collar cloud . . . Yeah, I'd like another 'spout, but if I'm stuck with what I've got now, I think it'll still have been worth the trip."

Glenn nodded to himself and rummaged in the refrigerator for the fish. It would probably be a long time before one could do more about tornados and their oceanic cousins, waterspouts, than issue tornado watches and pray everyone reached a cellar in time;



but Markham, though a university man of only average competence, was laying a good foundation for those who would come after him.

"Any word on that Nova University seaship, Glenn?"

"No, John. There's a lot of storm activity in that part of the world, and they can only search for them intermittently."

"Sometimes, we forget that scientists have to take our losses too."

From anyone else, that would have sounded cold and unfeeling, but Markham had been a convoy fighter pilot during the Archipelagan War. Twice, he had been pulled from the icy ocean in only his lifejacket, half-dead from exposure and frostbite. Unaccountably, Glenn saw an image of Joan untying a ribbon and shaking free her long brown hair, but he put it out of his mind. Had he really been away as long as the calendar said?

By the time the frying pan was crackling, the lounge was already half full. Jenny and Todd were chatting animatedly over Glenn's shoulder, fixing soft drinks; and Ransom, the massive, shock-haired head of the INTOAS contingent on *Zephyr*, was laughing with the slight figures of Dick Janwicz and his wife-coworker. Several students had arranged themselves on the rug close to the screen.

Markham came up to get a glass of milk and sit down again while there was still a free chair. "Ah, that smells good, Glenn, but—"

The theme for *Star Rangers* drowned him out. Space opera had always been a staple of video and cheappaper literature, perhaps because of the enduring legends—supported in modern times by strong biological evidence the man was not even distantly related to any existing or extinct animal on *this* planet—that men had once sailed through space as easily as the stars and had come to Eahonua as castaways. Now, *Star Rangers* had brought new zest to a stale genre.

Glenn leaned forward as each name flashed briefly on the screen. Troy Samson was every woman's idol, but Glenn liked him. Although Troy had originally been drafted for the movies solely because of his good looks and athletic ability, he had developed into a pretty fair actor who played his role with a gentle touch of humour, encouraged by a wise director and story editor, that kept the show from ever taking itself too seriously.

"Last week, *Tempest* and *Galaxy* were marooned on a planet in the Black Gobi cluster, unsure whether Rensling or the Gobi would

find them first. The Gobi came! The space torpedoes on the damaged Starduster IV, fired by remote control, sent one cruiser plunging down like a meteor, but three more hunt while the Rangers flee on foot, and Torg's dreadnought waits above to blast any vessel foolish enough to interfere. And so—"

"Steve, Steve, I need a rest. They'll have us no matter what we do. Steve—"

Markham grinned as he leaned over the bar and shook his head, then saw something out of the corner of his eye and frowned as he turned that way. He pointed to his chest, raised his eyebrows, waited a moment, and then leaned over to Glenn and whispered, "I think Jeremy wants you."

Glenn turned off the heat and covered the pan. Wading through the watchers, he followed Jeremy out into the corridor and closed the door behind him. "Whitsun wants you in the radio room. A typhoon is driving towards Arashah, and Brodsky's in a stew."

The radio room was in one end of the control gondola more than a hundred meters forward, and the keelway was nearly as cold as the outside air. Glenn was shivering and slapping at the holes in his much-worn sweater by the time they climbed down from the hull. Brodsky's strong voice was ripping clearly through the static: "Do you understand? If we evacuate and we're wrong, they won't go the next time. If we don't and we're wrong—"

Almost to himself, Whitsun answered, "The surge will drown a couple of thousand people." Much louder, he added, "Our model isn't that good, Harry. It's still in the—"

"Can you run it on board?"

"Yes, but—" Whitsun looked up. "It's mostly yours, Glenn. How long will it take to run on the Ibex?"

"A couple of hours, but the real trick is getting in the data."

"Harry, Glenn says—"

"What do you say?" Harry Brodsky had taken off his uniform five years earlier; but under stress, he still tended to judge people by the weight of brass on their shoulders.

Whitsun looked at Glenn's faded workpants and perforated sand shoes, then barked into the microphone. "What he says, I say. We need all the data you can give us by teletype."

"Direct reel?"

"Yeah."

"You'll have it."

A moment later, Brodsky broke the connection and Glenn hurried back to dig out the driver deck for his program. Four of them

shared two bunkbeds in each compartment, leaving little space for individuality, but he still found room for a couple of treasures under the bed: his coin collection, begun when he was only seven, and a photo album with pictures of his family, the coast and islands near his home, and his first and thus far only girl friend, whom he had not seen in nearly two years. Tucked in around them were boxes and boxes of computer cards: the trademark of the theoretical geophysical fluid dynamicist in this era. He rummaged through them until he found one labeled "Storm Surge" and worked it free.

When he reached the computer room amidships, a reel of magnetic tape was already turning, digitally writing raw data from the teletype link. "My objective-analysis subroutine uses tape staging. Will there be enough room on the disk?"

Roger, the computer technician, nodded. "Whitsun gave me the scoop while you were getting your deck. I made a save file on a reel only a couple of hours ago, so I just bumped all the program files off the disk except yours." He grinned. "I knew you'd tape stage. You always use the best way even when it's hard."

Glenn smiled, and the constriction in his stomach loosened a little. Roger liked him because he was always trying to keep the debugging and running time of his programs to a minimum, even if it meant overdesigning his own codes.

"When will we have all the data?"

"Another ten minutes. It must be off tapes in Weather Central."

"Too bad. A little faster and I could catch the end of *Star Rangers*."

"Listen, my kids think Steve Tempest is the greatest man alive. I'd just come back from a six week tour when the first movie came around—whoa, they didn't want to play with daddy, no, all they wanted was money for tickets and help with their fan letters—in crayon."

"Think what it would be like if there really were such a person."

"Oh, brother, not in my lifetime, I hope." They chatted amiably about his children while the tape whirled; and for a few blessed moments, Glenn forgot his doubts as he looked over the latest family snapshots.

When all the numbers had been transferred to the disk so that the central processor could access any of them electronically without waiting for a tape rewind, Roger went out for coffee. Glenn stayed in the computer room, worrying over the parameter tables,

running output spewed from the line printer, and checking his cards and the listings of his program files until he was as sure as he could be that the code was running correctly. Even so, a missed minus sign, a faulty digit, in a program with more than two thousand statements—

He put these gloomy thoughts out of his mind and went back to the lounge to finish his supper. As he uncovered the pan and turned the dial to WARM, he felt a surge of anger against the forces that had trapped him. The model was meant only for research. The interactions of air and sea are as complex as the interrelationships of blood, bone, and cell in the human body: a thousand separate processes functioning simultaneously, each in the long run essential. Incorporating in a numerical model all the scales of motion, all the physics of condensation and radiative transfer—even those that were understood—was as preposterous as trying to predict the boiling dust clouds of a sirocco by following the trajectory of each individual grain of sand. All one could do was to decide—partly by mathematical argument, partly by intuition, and partly by experience—which observable degrees of freedom were most important, write a code to predict them, and parameterize the rest through undisguised fudge factors. All our lives, he thought, we confront the fact that we can never truly understand another human being, even ourselves: why do we expect such perfect mastery over that other complex miracle which is a cloud? He ate woodenly, as filled with jumbled memories as a drowning man: dockside before his first cruise, his seminar on Taylor columns in the great hall at Nova University, an argument with Joan.

Karen and Mikhail, who had just announced their engagement, laughed softly; they were sitting on the couch with their backs towards him, holding hands, and for a moment, Glenn smiled in spite of himself.

A research airship in the stratosphere gave few chances for privacy; out of unconscious habit, his mind had shut them out until they laughed. All of them had had to adjust, although he could think of few things in his own life that would be of interest to anyone else. He suddenly saw himself chasing a laughing Joan across the beach on a glorious day at Ruiz Island, and put the memory out of his mind without self-pity or sadness.

As soon as he was alone again, his depression returned. He finished his meal, covered the pan, and put his head in his hands.

The room abruptly burst into light, and he heard a high, whin-

ing voice call out, "Glenn? Glenn, I have this problem—" Dick Slayton—pudgy, fawning, never understanding why his numerics wouldn't work, always looking for someone else to do it for him, to touch his cards with philosopher's stone and turn them directly into publications—was waddling over to the bar with a massive sheaf of printout.

Glenn stopped listening for a moment. He had already worked a long day, he was under terrible pressure, he was still hungry, and Slayton would simply never use his—

He turned away and put the little tin of pudding back in the refrigerator, slowly.

"Glenn?"

Glenn looked at Slayton and smiled. "Why don't we go down to the library where we have room to spread them out? I'm doing some important runs—orders—so why don't you go ahead and I'll tell the computer room where I'll be."

Beaming, Slayton left obsequiously. When he was alone, Glenn tiredly rinsed out the frying pan. If only Slayton wouldn't take his bugs so personally. With a feeling of infinite weariness, he put down the towel and worked his face with his hands, then punched three digits on the wallphone.

§ § §

By the time Glenn reached the computer room after Roger's call, Ransom and Whitsun were already poring over the contour maps. The plotter had superimposed each velocity component and the significant wave height on the outline of the coast, drawing maximums and minimums and curves of constant value the way mountains and valleys are represented on an ordinary topographic map.

Glenn asked, "How's it look?"

Whitsun shook his head. "What do you think?"

For several moments, Glenn stared at the graphs, having trouble spreading them out on the table because of the glossy, chemically-treated paper, then straightened up.

"Normally, I would have to look these over very carefully, but if the hurricane stays on its predicted course, it'll wash away half the delta."

Ransom let out a deep breath explosively. "Well, that makes it unanimous. Walt, I'll call Brodsky. Why don't you and Glenn make a couple of runs with a few degrees of deviation from predictions. What happens if it suddenly turns east, what happens if it suddenly turns west, that type of thing."

"Well, I can tell you already. If it gets within fifty kilometers of the coast—"

Ransom interrupted with patient impatience. "Yes, Glenn, but bureaucrats— Well, it's not just Brodsky; to the Governor-General and the rest, computers are gods, and the men who program them only mortals."

"You're a bureaucrat yourself, Paul."

"I know, Walt, and sometimes I wish I was back with the navy. It was authoritarian, but at least it was decisive authority. Civilian are always trying to pass the buck. Well, let's get after it. They'll start the evacuations immediately."

Glenn was relieved. He had designed the program deliberately so that the change of a couple of cards would use the library map projection routine to rotate the coast a few degrees with respect to the computational grid about some arbitrary axis which he would choose to be the storm's current center, and he wanted to make the additional runs. He knew, though, that the delta was a very primitive and backward region, and he was afraid if they waited for them, it would be too late. He hung around until the first run was well underway and the second had been read in and stored on the disk, and then said goodnight to Roger. Now, it was all out of his hands.

In his room, the other three were already asleep. Kastlereagh, the aeronomer who bunked below him, stirred slightly as Glenn rolled in, but did not awaken, leaving him alone with his thoughts.

He was afraid. There was no longer anything he could do. In his mind, he could see the evacuations already beginning in a land he had never visited: poor, barefoot farmers roused from sleep by the army, told to flee with only what little would fit on the trucks, told that within a few hours, their fields, their houses, their entire world, would be swept away. To those poor people, the inundation of the rest of the planet, of those other lands, beyond the delta, that they had heard of only by word of mouth and never seen, how could it matter to them? A man's world is the one he knows, even if it is only a few kilometers of raj-rice in the delta of the Arashah.

He thrashed around for a long time, trying to drift off, but finally he slipped down from the bunk, threw on the battered army jacket that was the last reminder of his compulsory military service, and walked to the lounge.

Markham, a confirmed nocturnal, was reading a novel from a

microcard projector and nibbling chips.

"Hi, Glenn."

"Hi, John."

"Something wrong?"

"No, I just couldn't sleep."

"Ransom and Whitsun went to bed only a few minutes ago. The evacuation of the delta is in full swing."

John saw the sudden look of fear on Glenn's face and smiled blandly, rubbing the scar under his arm. "It was your model, wasn't it, that predicted the high storm surge?"

"Yes. It worked okay on the last two events I used for tests, but I've never forecast with it before. It was supposed to be just a research tool."

"That's what we all say. We like to think in our trade that scientists are different from doctors—that life and death doesn't hang on our mistakes—but when we track and forecast a hurricane, what doctor could do more to save lives?"

"Yes, but—"

"It's not just us. Where would medicine be if engineers hadn't developed the pacemaker and heart-lung machine, if chemists hadn't synthesized a whole spectrum of compounds for physicians to try, if physicists hadn't invented the electron microscope so that they can really *understand* the cell and disease instead of just pushing pills like a witch doctor in white robes?"

"Yes, but if I'm wrong, most of them won't go next time. You know the fable about crying wolf. From what Ransom says, one mistake is enough with them."

"Do you think there'll be high tides?"

"Yes. It's a big storm and the way the winds and currents are running, my model predicts it will flood half the delta."

"Well, that's all you can do. Okay, you may be wrong, but could you stand by and do nothing? It seems so easy sometimes."

Glenn didn't answer, but he felt better. For a few moments, he lingered at the window, cupping his hands against the reflection to stare at the dark ocean below. Finally, he flashed John a smile, went back to his room, and fell asleep.

§ § §

Glenn was frying fishcakes when John leaned over the bar. "How much were you over by?"

"About 40%. It still must have done a lot of damage."

"Will you—" A thunderous explosion drowned him out, and he half-turned to see the wreckage of a pirate cruiser disappear be-

hind a mountain. Tempest and Galaxy had only two more to out-run in their stolen scoutship.

"Will you need to change it much?"

"No, just tune the eddy viscosities. Anything you use is a guess since we don't understand turbulence; the best that you can do is pick a number that makes the model work most of the time."

John nodded, and Ransom, his jovial face looking unusually serious, suddenly stuck his head over the bar.

"The best estimates are that your warning saved 500 lives. If I was still in the navy, I'd give you a medal but—" he spread his big hands in a gesture of helplessness, "but I just wanted to tell you it was a damned fine piece of work."

He was gone as suddenly as he had come and John grinned. "Told you." He grimaced at the sound of screeching metal behind him, stole a couple of mints, and shook his head at Glenn, who leaned on his elbows and laughed. Tempest and Galaxy had crashed in their damaged scoutship and only a miracle could save them.

Glenn smiled and waited for it to come.



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ABOUT NOTHING

by Isaac Asimov

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In the course of introducing his short-short story, "Quarantine", in our first issue, Arthur C. Clarke incautiously claimed that he could make worse puns than our Dr. Asimov. Isaac immediately rose to the challenge, citing first this story, which originally appeared as one of a series of SF-stories-on-a-postcard, first published in England.

All of Earth waited for the small black hole to bring it to its end. It had been discovered by Professor Jerome Hieronymus at the Lunar telescope in 2125, and it was clearly going to make an approach close enough for total tidal destruction.

All of Earth made its wills and wept on each other's shoulders, saying, "Good-bye, good-bye, good-bye." Husbands said good-bye to their wives, brothers said good-bye to their sisters, parents said good-bye to their children, owners said good-bye to their pets, and lovers whispered good-bye to each other.

But as the black hole approached, Hieronymus noted there was no gravitational effect. He studied it more closely and announced, with a chuckle, that it was not a black hole after all.

"It's nothing," he said. "Just an ordinary asteroid someone has painted black."

He was killed by an infuriated mob, but not for that. He was killed only after he publicly announced that he would write a great and moving play about the whole episode.

He said, "I shall call it *Much Adieu About Nothing*."

All humanity applauded his death.



SURE THING

by Isaac Asimov

Continuing his response to Mr. Clarke's challenge in the matter of SF puns, our Good Doctor here offers another short-short, this one written especially for this contest. The Editor, however, hastens to assure all of you that these will not be a permanent feature of this magazine.

As is well-known, in this 30th Century of ours, space travel is fearfully dull and time-consuming. In search of diversion many crew-members defy the quarantine restrictions and pick up pets from the various habitable worlds they explore.

Jim Sloane had a Rockette, which he called Teddy. It just sat there looking like a rock, but sometimes it lifted a lower edge and sucked in powdered sugar. That was all it ate. No one ever saw it move, but every once in a while it wasn't quite where people thought it was. There was a theory it moved when no one was looking.

Bob Laverty had a Heli-worm he called Dolly. It was green and carried on photosynthesis. Sometimes it moved to get into better light and when it did so it coiled its worm-like body and inched along very slowly like a turning helix.

One day, Jim Sloane challenged Bob Laverty to a race. "My Teddy," he said, "can beat your Dolly."

"Your Teddy," scoffed Laverty, "doesn't move."

"Bet!" said Sloane.

The whole crew got into the act. Even the Captain risked half a credit. Everyone bet on Dolly. At least it moved.

Jim Sloane covered it all. He had been saving his salary through three trips and he put every millicredit of it on Teddy.

The race started at one end of the Grand Salon. At the other end, a heap of sugar had been placed for Teddy and a spotlight for Dolly. Dolly formed a coil at once and began to spiral its way very slowly toward the light. The watching crew cheered it on.

Teddy just sat there without budging.

"Sugar, Teddy. Sugar," said Sloane, pointing. Teddy did not move. It looked more like a rock than ever, but Sloane did not seem concerned.

Finally, when Dolly had spiralled half-way across the salon, Jim Sloane said casually to the Rockette, "If you don't get out there, Teddy, I'm going to get a hammer and chip you into pebbles."

That was when people first discovered that Rockettes could read minds. That was also when people first discovered that Rockettes could teleport.

Sloane had no sooner made his threat when Teddy just disappeared from its place and re-appeared on top of the sugar.

Sloane won, of course, and he counted his winnings slowly and luxuriously.

Laverty said, bitterly, "You *knew* the damn thing could teleport."

"No, I didn't," said Sloane, "but I knew he would win. It was a sure thing."

"How come?"

"It's an old saying everyone knows. Sloane's Teddy wins the race."



A SOLUTION TO BEING LOST ON CAPRA (from page 34)

Dr. Ziege could have started from any spot on a circle about 11.59 myriameters from Capra's *south* pole. Driving 10 myriameters south would take her to a spot $5/\pi$ myriameters from the pole. Now if she drives 10 myriameters east she will complete one full circle around the pole. Continuing 10 myriameters north returns her to where she started.

The rescue party found Dr. Ziege and her companions where Felix had predicted, and in time to save their lives. On the way back to earth Hilda suddenly realized there was a *third* spot on Capra from which Dr. Ziege could have started! For this second solution see page 63.

TWO STRANGERS

by John Shirley



This writer learned the hazards of publishing early; he was expelled from high school for putting out an underground high school newspaper. Mr. Shirley is now settled in Portland, Oregon; he describes himself as young (23), foolish, and sincere. He writes for a living, sings rock'n'roll as a hobby, and loves to look at himself in the mirror.

I was well out over the Barrens before I became aware of the leak in the fuel line of my Cherokee twin-engine. Two hundred miles from any outpost of whitemen, with less than ten minutes of engine time left. Luckily, it was summer—if I set down at this time of year at least I wouldn't freeze, and there was a chance that I could make my way back to the RCMP outpost.

It was July of 1950, and far to the West the Korean War raged, but its echoes hadn't reached the North Canadian wilderness. Here, a few hundred miles northwest of Churchill and the coast of Hudson Bay, in the Mackenzie District, was the most desolate region of Canada, and no sensible whiteman ventured into it. Me? Nothing sensible about me. I was searching for land likely to be hiding oil deposits.

I glimpsed something symmetrical in the random grey brown labyrinth of ridges and ravines below. A village? I circled lower. The swell and dip of the threadbare land grew steeper, just as waves begin to lift before a rising storm at sea.

The engine muttered to itself and then fell spitefully silent. The only sound now was the keening of the wind. We began to fall. I caught a spinning glimpse of lake shore and black smoke rising from a ring of huts, and then an updraft slapped the nose of the plane upward and I tried to angle into a glide. I was partly gaining altitude when my little plane smacked into the dark face of the lake.

It was two days before I woke.

§ § §

Pain and a bright light. The light was from a campfire, the pain from my left leg. Smoke stung my eyes, overwhelming odors of sweat and decayed caribou flesh assaulted my nostrils. The summer tent was barely weather resistant: great streaks of cerulean sky showed along the joints, between the stretched skins. Half the smoky, twilight enclosure was taken up by a sleeping mat of willow twigs and lichens—summer luxury—covered with a fragmentary blanket of tanned hides. This was the communal bed where the entire family slept huddled together. The rest of the floor was littered with caribou scraps. An entire boiled head of deer, already well chewed over, glared at me from the pot with eyeless sockets. Hanging from the dozen pole supports were odd bits of clothing, boots, and parkas waiting for the long winter. I was lying on a soft bed of lichen, covered to the neck by a pitted deer-hide. Three elderly women were my nurses, their wide, worn faces as creased as leathery funeral hides draped over an ancient

burial mound. Seeing I was awake they clucked and rattled excitedly, and one of them sent out for the men.

I understood snatches of their conversation, and by their dialect guessed them to be Ilhalmiut, the People of the Deer. I tried to raise myself on an elbow to speak, only to fall back grunting as agony shot through my left leg and thigh. Broken bones in at least two places.

A great grinning moon filled the sky before me, broad and sal-low: the blur melted and I recognized the face of an old friend.

"Kakumei, I . . ."

"Good to see you again," he said in his own tongue. "It has been nearly ten years since we worked together at the trading post." And then in the French he had learned working four years for the traders: "Lie still. We will tend you. You will be well soon."

I smiled but shook my head. Kakumei shouted orders. An old woman brought me a rough wooden bowl brimming with simmering deer fat and chopped innards. I ate it as if it was Mom's Apple Pie and then Kakumei imperiously ordered me to sleep. I obeyed.

My dreams were oddly elongated, like pulled taffy. I woke fitfully now and then, once to find a cloud of flies buzzing thickly over my open mouth. Another time I caught a timid gaggle of small children studying me with somber onyx eyes.

After a foggy while I seemed to see an odd little girl, perhaps seven years old, dexterously manipulating a strange metallic cylinder, a thing about six inches long and made of some unfamiliar alloy, like nothing that should be found among the Ilhalmiut. She was running the cylinder up and down my injured leg, not quite touching me. I had some delirious notion that she was trying to do me harm, and I raised a trembling hand to shoo her away, but she only smiled. There was something odd about her teeth. A tingling warmth penetrated the leg and the pain was ebbing . . .

§ § §

It was night when I awoke. A fire nodded congenially to me. Kakumei was there, stirring coals to heat a cast-iron pot of deer-fat soup. Hearing me move he knelt beside me, smiling.

"You have rested three days, friend Trumbull," he said, "and you will walk tomorrow, lazy one!"

"No. The leg is broken, brother Kakumei. I know your healer must be powerful, but—"

"Try the leg."

I shrugged, and to please him I cautiously moved the leg. No pain. Some herbal anesthetic? But there was no sensation of frac-

tured bone-ends grinding. Gingerly, I bent my leg at the knee. It was a trifle numb but seemed otherwise functional. I stood up—dizzy, nauseous, but whole. I put weight onto the leg and when circulation returned I found it was as good as ever.

"I thought it was broken!"

"It was, my friend. Sit down. You have one more day of rest. So says the shaman."

"The little girl—that thing—"

He nodded almost imperceptibly, his black eyes full of reflections. "I have a story to tell you. You will hear it because you have helped the Ilhalmiut as no other whiteman when you were an agent regulating the traders. And you will hear it because of your leg, because knowing is not wondering and not wondering is not seeking. No one must seek him out . . . it should be . . . a thing between us . . ." His brow knitted as he struggled to express the concept.

He meant *it is a secret*, though he had difficulty saying it. The Eskimo are by nature a remarkably honest and cooperative people, and secrecy is almost unknown to them. They had picked up a smattering of the craft with the coming of the whiteman, but don't yet have a civilized knack for lying.

"All right. Tell your story, Kakumei. It will be between us two only."

"Yes. Between . . . us two only." He crossed his legs and looked into the fire. "It was the peak of winter when the stranger in the sun-sled came," he began.

The fire cast dancing shadows on the inner face of the tent, and the shadows seemed to take on shape . . .

§ § §

It was a time of famine and plague. The white traders had brought riches to the Ilhalmiut, as the Eskimo reckons wealth, and had taught them how to bring down many, incredibly many, deer with the rifle, where before they had used the bow and spear. The traders stayed for two generations. But when the trade in fox furs began to decline, the traders abandoned their cabin and the Eskimos, taking with them the only supply of bullets within hundreds of miles. But this generation of the People of the Deer no longer knew how to hunt with spears and arrows—they had been raised on rifle-hunting. And Tuktu the deer was scarce that year, its numbers having been drastically reduced by over-hunting during the last two generations. Old Dukto the shaman said that the deer came no more because its People had forgotten

the deer spirit, had scarcely honored Tuktu in dance and sacrifice during their time of plenty. Whatever the reason, there were hardly enough caribou to feed all, even with ammunition, and without it—

They starved. The whiteman had no more use for the People of the Deer. And no one looked to see how they were getting on.

Winter was coming, and the night was getting longer. Drifts of loose snow masked the land. In the Barrens there are hard winters always; there are bad winters sometimes, during which life becomes almost impossible for a people who have not stored up many great caches of food. This year the winter was very bad indeed and there was no food to be stored.

In Eskimo tradition it is the hunter who must be fed first, for it is he who is responsible for the long-term survival of the tribe. And at first what meat there was went to the men who used the margin of strength it gave them to range the land in the white maelstrom, hunting fruitlessly. Several never returned, lost in the continual storm. Those who came back returned with empty hands.

The heavy snowfalls made it impossible to catch fish or even trap peat mice. The last of the stored meat vanished, and the last of the ammunition. It was the old people who died first. It was their obligation. At this time there was still hope that the whiteman would return with help, so the shells of the departed were not eaten by the tribe as they would have been in dire emergency; but the wolverines and wolves grew fat on them, ravaging the burial grounds fearlessly, as if they knew that the Ilhalmuit were not strong enough to stop them.

Soon the children began to waste into pot-bellied skeletons. Babies sucked at mothers' breasts gone dry of milk. Without admitting it to one another, the hunters began to sacrifice their own food portions to their children and wives, pretending to be full. Occasionally a gull or a hare would wander near, lost in the storm, and this would keep the tribe going a few days more.

Two children were born in these empty, early months of winter, both dead on delivery. An Omen, said Old Dukto.

Reluctantly they took the dogs a distance from camp and slaughtered them one by one, and their dry, tasteless flesh was given to the children. Kakumei took only enough to maintain fortitude for the hunt. But the hunt was futile.

One day, Kakumei woke from a delirium to find that his infant son Nantui had died of hunger, his tiny form frozen in crab-like

contortion in the far corner. Glazed eyes open, face gaunt and entreating. Kakumei's mate Tlekon had been too weak to carry the child outdoors. Or perhaps she was not yet aware of its death. She lay staring expressionlessly at the ash-encrusted ceiling, her face pallid in the glow of the sputtering oil lamp. There was dry wood beside her, but she had let the fire go out. Slowly, Kakumei got to his knees, dragged the child outside and came in to build up the fire. By the greater light of the campfire he found his mother dying, an emaciated rag-frame whose eyes flickered more dimly than the dwindling oil lamp, huddled with remaining child, both of them in a stuporous half-sleep beneath a pile of skins. The days grew shorter, shorter, daylight going out like a tired candle.

Long before, they had chewed to uselessness the last rawhide thong, sucked the marrow from the last dug-up garbage bone. When the last of the sled dogs was eaten, shared among the whole camp, and the last child was showing its ribs and crying whenever awake—then, while the others slept, Kewatn, mother of Kakumei, crawled out into the snow unclothed, so her family could survive a short while longer on her withered flesh. But wolves took the body of the dead woman.

With hunger came sickness, and by the peak of winter half the Ilhalmiut were dead; their burial ground was later to be called the Place of Countless Bones.

Autek went one day to find a distant camp where his brother lived, where he hoped to find charity for his starving family. He found only naked frozen bodies scattered far from their igloos. The merciful madness had come and the dying had torn off their clothing and with the last of their strength, run off into the snows to end the long agony quickly.

Autek barely made it back. He found his wife frozen in a pathetic ball under skins that had failed to save her; without the fat in the deer meat even the sturdy Eskimo metabolism cannot survive the Arctic cold for long. Autek's two little boys were clinging to their mother's corpse. He rubbed warmth into their frost-bitten fingers, fingers like tiny brittle talons. But soon the children of Autek died. Autek followed them within three sleeps.

In the igloo of Kakumei the only movement came when he reached listlessly out to stir the fire. The wood was nearly gone. Tlekon lay still, her breathing fitful and shallow.

A time came when the storm died down, when the snow was so heavy on the igloo it creaked with the weight. The wailing of the children of Tlekon and Kakumei was the only sound except for

fits of coughing and the drawn-out sighing of the wind.

Then a great angry noise broke open the sky. Thinking the thunder-and-crackle a rifle shot, Kakumei crawled to the doorway and dug out through the snow. He broke out into the night and peered into the dim half-light of the winter sky.

A huge sled on fire! A mighty sled aflame, bigger than any five Ilhalmiut sleds together, racing down the hills so rapidly it flew a man's height over the snow. It roared straight for the camp and its brilliant blue light shimmered like moonlight on the white slope. The sled was wedge-shaped like those of the People, but larger and fiery and everywhere smooth, with no lashings or burdens, and was driven not by dogs but by something unseen. There was a mighty rumble and roar, an explosion of blue-white light, and then the sun-sled was buried in a drift in the center of semi-circle of igloos.

A dream sent by hunger, Kakumei thought. Or an evil spirit come to collect the last of the living.

The few men with strength enough to crawl out of the igloos shielded their eyes, as the snow melted into pool around the sled. Gradually it lost its glow and became leaden. No one moved. Surely the spirit inhabiting the sun-sled would strike down anyone presumptuous enough to touch its vehicle. But then a door appeared in the side of the huge wedge, dissolving into round darkness.

It was no spirit, Kakumei realized, but a man who climbed laboriously from the aperture. He staggered clear, up to his knees in slush, and took a few tentative steps toward the igloo of Kakumei. He was dark as the Ilhalmiut, dressed in a tightly woven cloth like that of the whiteman; his stature was like that of the Eskimo, but his eyes were unnaturally deep shade of green. He made a weak motion with a black-gloved hand and then fell on his face. At that instant the fiery sled, now the color of ashes, began to melt like an icicle in the spring wind. Soon, it had become a quicksilver puddle. Within an hour even this mirrorpuddle vaporized, leaving no trace.

It took most of Kakumei's remaining energy to drag the stranger into the igloo and cover him warmly in skins. Much later the stranger awoke. He sat up and blinked, gazing fearfully about. Then he relaxed and nodded to Kakumei.

Kakumei croaked out: "I'm sorry we have no food to offer you," (for it is unwritten law that any traveler will be fed immediately on arrival), "and we are ashamed that we have none even for our-

selves. But soon we shall die and perhaps then you can eat of our useless flesh and gain strength to find your home." Kakumei, seeing that the stranger didn't understand, repeated the message in French.

The stranger smiled and pointed at his ears. His smile revealed peculiar teeth. He spoke in an unknown and high-pitched tongue and seemed to be asking a question.

The baby was awakened by the stranger's voice and wailed for food. Something haphazard in its cries suggested that it would not live to cry another day.

The stranger seemed to be listening to the child, as if he understood its secret tongue. Then he nodded. From a pouch on his waist he drew forth a silvery sphere, and tapped it with a nut-brown finger. It rang softly, but the resonance did not dwindle—instead it grew louder and deeper, till the call seemed to fill the smoky chamber and pass out of the range of hearing.

The stranger smiled and took the sphere outside. Wrapped in hides, he squatted near the doorflap, clasping the bell. Occasionally, as he rocked back and forth, crooning, he tapped the bell, which then thrummed and sang, each time with a fuller resonance.

Soon, Kakumei heard light, hesitant footfalls outside.

He took many deep breaths until he had the strength to crawl nearly to the door.

But the snowshoe hare came to him. It hopped amiably around the stranger, who hadn't moved. The bell sounded again, and the hare sniffed curiously at it. It was at this moment that Kakumei snared the animal with a swipe of his right hand. He broke its neck and tore open its throat so that the baby might sip the strength-giving blood.

In this way were all in the camp fed, one by one. As the stranger crooned and rang the bell, the fox would come, or the rat, or the hare, or the ptarmigan, each walking into a different igloo as calmly as if it were its own den. Soon all bellies were full, and only then did the stranger eat. He tore off strips of raw rabbit flesh and pressed it daintily between his teeth—his teeth were only two, one upper and one lower, each a solid bar curving around to fill his gums. Each was sharp but unsnagged, and the meat disappeared easily between the chewing white bars.

Seeing those stricken with sickness, the stranger brought forth a cylinder, which one day would heal the broken leg of a downed pilot—and worked its magic, and shortly the sick were well.

A song-feast was declared to welcome the new shaman. For the council of hunters had reckoned that Kaila had sent this shaman to fill the place of the old shaman, Dukto, who had died. And the nights grew long and longer. But the long nights were not forlorn; they throbbed with many song-feasts. For days the people crowded into the igloo of Kakumei to chant and dance and tell the ancient stories. The stranger learned the language rapidly. He would sit in the close-pressed throng of the remaining twenty two Ilhal-miut, chanting the few songs he had learned and swaying contentedly with the rest, his green eyes slitted and his strange teeth clacking in time.

Kakumei would take down his great hoop drum and hold it over the chuckling fire till the hide shrank from the heat, becoming taut and eager to be thumped. He would offer the drum to each man, but the hunters were modest and the drum would be passed about until at last one man accepted it. He would walk diffidently to the center of the group, hard by the fire, where he would hold the drum by the thong handle and twirl it around and around, striking lightly along the edge of the hoop with a stick. The tempo would be a slow rhythmic beat at first, as the drummer shuffled about, chanting and beating faster and faster. When it was Kakumei's turn at the drum he would dance, bending sharply from the waist, snapping back and forth rapidly and singing with great aplomb:

*Aii the Northern Lights came to meet the soil that day
at the lake of Hungry River
and the messenger of Kaila came to the soil that day
a messenger who sings so sweetly the animals give their
lives to hear
and gave their lives to the People who dance like happy hares
at the lake of Hungry River*

*Aiee Great is the light in the Northern sky
Great is the light in the heart of the messenger
and great is the kindness of Kalia to send such a mes-
senger
to the lake of Hungry River . . .*

There was much singing that season, and many dance contests in friendly rivalry, and much gambling and giving of gifts. The new shaman was given a parka made for him by Tlekon, a clay

pipe, and a precious steel knife. In return he awarded Tkekon the cloth from his discarded sled-suit, from which she made a papoose for Tleitn.

So passed the winter, the stranger calling food and the People giving him their language, skills and devotion in return.

The People did not doubt the world of the stranger when he explained that he came from Itakti, the stars. He described his home world, a place very like this one, where the climate was ever as it was in the Barrens—and it was for this reason that he had chosen to bring his wounded sky-sled down here. He would be unable to return to the Itakti unless someone among his people had heard the urgent message he had sent before the crash. Then perhaps they would come to take him home. But there were people much like the Ilhalmiut on his world, a few tribes stubbornly remaining, and he had spent much of his time with them. He preferred their company to that of his civilized peers, and so perhaps it would be better after all if no one came for him. As he remarked to Kakumei: "Why should I choose there over here? They are two separate places, but in both I have the same Heart."

His magic devices were of no use to anyone but himself since they responded only to his Heart, and to no other unless it be one of Like Heart. And even one of Like Heart would require many years of training to learn to use the healing rod and the calling bell, either of which would seem like chunks of lifeless metal even to the wisest of the whiteman's shamans.

By spring, the Ilhalmiut were ready for the hunt. At the urging of the new shaman, they had practiced the old skills of bow and spear again and again. For the power of the calling bell might wane, and the Ilhalmiut must learn to shoot arrow and hurl spear in preparation for the return of Tuktu.

But with the first hot breath of the Spring Chinook came the white stranger, in an airplane that landed a few hundred yards from the winter camp on the surface of the frozen lake.

The new shaman called Kakumei into his igloo and spoke with him in serious tones.

So it was when the white man came to the camp of the people he was met by Kakumei. The Eskimo extended a hand to touch fingertips in the greeting of the Northern tribes but the stranger, the second stranger in this year of many tales to be told, took a wary step back.

"Greetings. I'm Captain Toliver, Royal Canadian Air Force," he announced loudly in French. "I'm looking for—"

"Please, won't you come and eat with us, friend Toliver?" Kakumei interrupted, smiling, nodding towards the igloos trailing the rich black smoke of cooking fires.

"Thanks no," said Toliver. "I'm looking for a man. Possibly he's an unusual man. I'm not sure what he is. I was flying patrol a few months ago. My plane and another. We encountered something. A sort of flying thing—like nothing I've ever seen. We went by the book and radioed it to identify itself. It didn't answer and it was pulling away. My partner tried to head it off and collided with it. He went down and the ship—or whatever it was—went on a ways, wobbling, and then I saw it go down. But I was low on fuel, I had to get back. Took me a long time to go through the data, get a fix on where the things must have fallen. Then I had to wait months for permission to go looking for it, because I was under investigation. I found the wreckage of the other RCAF plane this morning . . . I—" He stopped, frowning, seeing that Kakumei didn't seem particularly interested. "Look," Toliver went on hastily, "You *do* understand what I'm saying, don't you? You said something in French a little while ago. Is that all the French you know? Do you understand? Did you see this thing? This flying thing? It was fast and bright. Real bright, like the sun. Like the sun, you understand?"

Kakumei shook his head slowly as if thinking hard. "Know only *some* French. You say it was too sunnny where you come from?"

"No, no. *It* was like the *sun*, this flying thing! Did you see it?"

"We have seen nothing like sun till yesterday, for all winter it was dark and only yesterday did the sun—"

"No!" Toliver stopped, and took a deep breath. He was a head taller than Kakumei and wore a grey uniform with black stripes along the seams of the creased pants and heavy leather boots; a leather flight helmet was tucked into his khaki belt beside his pistol. His face was long and fair, his blue eyes were small and sad above his long nose. He ran slender fingers through his short brown hair. His smiles was strained. "Friend, I have a feeling you're playing games with me. You're playing dumb. Well, if you hadn't seen anything you would have no reason to play dumb. So you're covering up for someone. Now, look, if I had a chance to help you, I would help. If I had the power to bring you people all the things that we have that you badly need—uh, telephones or whatever—well, I'd bring 'em to you. Truly. And I think it's only fair that you help me, now that you have the chance. Then, perhaps I can help you some day. You must. I—" He jumped at

the sudden loud crack of ice breaking up in the river. He looked around nervously. "Oh. The ice. The Chinook." He took another deep breath and looked Kakumei in the eye. "I know you're keeping something from me. But it's something I must know. The pilot who was killed—that plane that went down, that was my responsibility. I have to account for that. My report was a story of a crazy flying thing that was like nothing anybody's ever seen. They won't go for it. They said that Powell died in some accident and the error must have been mine for me to make up a story like that to cover up. I'm booked, I'm going to be court-martialed. Uhh—that means I'm in trouble with my people. You see? They think I was drunk or negligent. I've got to find this flying thing, pieces of it, or whoever was in it, and prove—"

Kakumei raised a hand. The stranger fell silent.

"We have seen no strangers but you. This is a big land. You have much to search." He turned to go.

Sputtering, Toliver grabbed Kakumei by the wrist and held him back. "You know!"

Kakumei looked at him with pity. Only children use force on others, and in this land they soon learned the unwritten laws. Why should an Ilhalmiut use violence against a man? It is understood that while there is food, equipment, or bodily strength in anyone of the huts no man shall want who comes in need. And what, besides food and friendship, is worth fighting for?

Kakumei looked the stranger hard in the eye. Toliver released him.

Again, Kakumei turned away. "Wait!" shouted Toliver. This noise sounded much like the bark of a dog. And Kakumei remembered the tale of the genesis of the whiteman. It is known that the first woman, after having a family of man-children, bore a litter of dogs. And these dogs multiplied and grew to be so many that the man and woman could not feed them and became disgusted with their whining, quarrelsome ways. So they set the dog-children into a canoe and launched them out into the great waters. And so the ancestors of the whiteman came to Toliver's homeland, across the seas. Toliver, then, was a lost puppy.

Kakumei turned to him and spoke: "Friend Toliver, if I came to you and asked you where I could find your own brother so that I could take him far away and show him to people, what would you do?"

"Damn! You *know*. A brother, you said? So, he must be alive. But he can't be your brother after just a few months here. It—

whatever came out of that flying thing—could not be brother to a *man*. It could not be a man—that thing moved so fast the acceleration would have crushed a man—”

“The deer is not a man. But the deer is a brother,” said Kakumei.

“I don’t want to harm you or your people. But if I have to bring an army in here to tear this place up looking, I’ll—”

He was interrupted by a great shout from the camp.

“Tuktu!” the People shouted, streaming from the igloos where they had hidden at the approach of the white man. “Tuktu the deer is come!”

The People of the Deer sang and rejoiced for here was meat and furs and bone-tools and gut-strings. The leaders of the herd trickled cautiously between the pillar-like sentinels of Inukok. The Inukok are rough models of men, semblances of men made with carefully heaped stones topped with discarded parkas, all of which deceives Tuktu, whose eyesight is poor, into believing there are hunters here and there and there on the migrating path. And so the caribou run into the opened space between the Inukok, funneled headlong into the spears of concealed hunters.

And it was by one of these rigid, baleful stone men that Toliver glimpsed the stranger. The stranger was dressed in what remained of the grey suit he had originally worn, clothed only from the waist down, having put aside the parka Kakumei’s wife had made. He was without nipples. The shaman smiled and waved and Toliver sprinted up the slope, drawing his gun and shouting. The caribou flooded in greater and greater numbers between the fence of Inukok and soon their clicking hooves had dug a great trench out of the snow, sending out rivulets of slush.

Kakumei watched from atop of boulder as Toliver dodged between the nervous caribou, who skittered aside as he bulled closer to the shaman. His gun gleamed blue in the slanting light of the new day. The shaman began to back up, motioning to Toliver, entreating him to follow. The whiteman was running now; he plunged into the thick of the herd after the shaman, coughing from the great stench and the clouds of flies. Kakumei heard Toliver cursing as caribou blocked his way. Then both men were lost to sight in the mottled torrent. The main bulk of the herd caught up with the leaders and the clay-colored tide swelled, filling the vast hollow between the two hills. There came a scream, distant and fluting.

When the herd thinned out, Kakumei found Toliver sprawled in

the shelter of a towering Inukok. He had had been trampled: his body was battered and broken, and he was coughing up tarry black blood.

His face was very white. "Damn thing up and vanished like a straw in a storm—gone—by damn—" Kakumei bent to administer what aid he could. Twenty feet away great bulls of the herd belowed and shook their massive antlers.

"The damn thing—" Toliver continued. "—I'd see it here and it'd vanish, then I'd see it over there and I'd go after it and it'd be gone—it wasn't human—I saw it close up—it was from *some-where*, I don't know." He coughed rackingly, bringing up another gush of blood, then caught Kakumei by the shoulder with feverish intensity. "—look—you—*kill it*."

Kakumei said nothing but his eyes asked: Why?"

"Because—because it's *alien*." Toliver whispered.

He died before Kakumei could reply: "And what are you?"

When Kakumei came down into the village, the other hunters had already gone to their kayaks to catch Tuktu while the deer swarmed across the Hungry River. For these were the People of the Deer.

In the igloo with the red feather over its doorflap, the shaman was waiting for Kakumei. With the shaman's help the ice was broken around the white man's aircraft; with the body of the stranger placed inside, it vanished with a gasping bubble into the lake. No one came again to seek the sun-sled.

And strong times came once more to the People of the Deer. And the shaman learned their ways and took a wife.

§ § §

"... the Winter of the two strangers was seven years ago, friend Trumbull, and the great shaman is gone now. His people came in a fiery sled at the very end of that Spring, and all that remains of him is his pouch of magic. He is gone from us forever."

I nodded and lay back, accepting the story, even the conclusion, without comment.

The next day I was ready for the lengthy kayak trip back to Churchill. Kakumei would accompany me, to see me safely home.

For a mile or so before the rapids, the river was calm enough to permit me to appreciate the summer dress of the Barrens. To the right were dark bogs strained with sepia dyes, bounded by swales of tall grass. On the hillsides, reaching ever more steeply over us, the slick green patches of dwarf birch scrub were set off by millions of minute blue and buttery yellow blossoms and by clouds of

tiny orange butterflies. The shattered ridges were suffused with shades of pastel from growing lichens. The many colors flowed together in the distance where the land still seemed dark and barren.

Since Kakumei and I were only a few feet apart, I could have asked him the many questions that haunted me. I could have asked him, for instance, about the hut I glimpsed half-hidden in a ravine as our kayaks swept past. The hut was well apart from the others, and I knew it to be the home of a shaman when I spotted the signatory red feather over the entrance. I saw a young girl, the girl with the peculiar teeth who had healed my leg, strolling towards the hut. I did not mention her to Kakumei, however, though I might've remarked on the green gleam of her eyes, when she glanced at us. I did not attack the discrepancies in his story: that only the stranger, or one of Like Heart (such as his offspring?) could operate the healing cylinder. If he had gone that Spring, how had his child been taught to use the healing rod, a knowledge which supposedly took years to acquire? And Kakumei had said *no one must seek him out*. How can one seek out a man who has returned to the stars?

When the daughter of the stranger from the sun-sled entered the hut of the red feather to greet her father, I very nearly spoke of it to Kakumei.

I cleared my throat.

The kayaks swept by, and round the bend. I kept silent.

Well, hang it then.

I didn't want to disappoint Kakumei by letting him know how poorly he had learned the whiteman's craft of lying.

A SECOND SOLUTION TO BEING LOST ON CAPRA (from page 48)

Dr. Ziege could have started from a spot so near the south pole that when she made the drive east it would take her around the pole *twice*. Of course this generalizes to eastern trips that go n times around the pole, where n is any positive integer, so the problem is solved by an infinity of spots, on an infinity of circles.

CABINET MEETING

by Michael Bishop

At 32, Michael Bishop has a wife, two children, a fine old house in Pine Mountain, Georgia, which they are renovating, and a MA from the University of Georgia; his thesis was on the Welsh poet Dylan Thomas. Mr. Bishop's third novel, Stolen Faces, will be out soon from Harper & Row.

Dressed in a pair of sodden fatigues, stooped in a concrete bunker built seven feet beneath the east wing of the New White House in New Washington, U.S.A. (formerly Forgan, Oklahoma), President Henry David Thoreau Montoya y Florit did not realize that the fate of the nation hung from the very essence—the revealing quiddity, to express it philosophically—of a single wire coathanger. Mind you, it was not what hung from the coathanger that was so important to our nation's destiny; it was the coathanger itself. And one can scarcely blame President Montoya for being ignorant of the mind-staggering future developments that depended therefrom. In the last two weeks the bludgeon of History had staggered him so many times that he had come permanently to doubt his own legendary sobriety.

§ § §

As this story opens, President Montoya was busy trying to unstick the doors on an antique chifforobe in the corner of his private bunker so that he could shed his wet fatigues and put on a velveteen dressing-gown. The chifforobe had been designed and commissioned of master craftsmen by Thomas Jefferson during the third year of his presidency way back in 1803, when no American worried much about visitations from beings not demonstrably human (other than those from the British, of course) and a man was free to hang his clothes in a piece of furniture as elegant as the imported silk in the stockings he wore. This chifforobe, in fact, was the only piece of furniture that President Montoya had ordered salvaged from the wreckage of the Old White House in Old Washington, D.C., as soon as it had become apparent that the combined forces of the Arab-Mediterranean-Israeli Alliance had forsaken that plundered city and were marching toward the great metropolises of New England. After securing the chifforobe, the

President—along with several top advisors and his Irish setter, Endgame—retreated westward in a dilapidated U-Haul van that Colonel "Feisty" Phillips had driven away from a caravan of looters while the driver of the vehicle was wrestling with an intransigent television set in the shattered display window of a local appliance store.

The U-Haul truck broke down on the barren, alkaline plains of northern Oklahoma; and President Henry David Thoreau Montoya y Florit, a physical-fitness addict and one-time winner of the Taos Marathon, led his scraggly assemblage of advisors the twelve remaining miles into the tumbleweed-infested environs of Forgan. As they followed the narrow asphalt road toward the bloated eye of the westering sun, Endgame, the Irish setter, trembled with fear at the sight of each disgruntled jackrabbit that lurched out of the roadside ditches and away into the bitter sage of the prairie. Chief Advisor Marvin C. Swearingin had to pull the dog along by its choke collar.

In Forgan the President's party found a number of die-hard Okies who had refused to migrate to Canada during the dust storms of '79, a few whitewashed houses, and a building of impres-



sive solidity that bore the proud trademark of an Enco service station.

"That's it!" President Montoya said with the same tone of astonishment, nicely commingled with gratitude for their deliverance, that had undoubtedly marked Brigham Young's voice upon his discovery of the future site of Salt Lake City. "That's it! Our new headquarters!"

And so it was.

Montoya had intended the station to be only a temporary headquarters, but on their second day in Forgan a messenger from Liberal, Kansas, informed the President and his aides that the Sino-Soviet-Subcontinental Invasion Fleet had sailed into the San Francisco Bay and that the entire West Coast lay prostrate beneath the indifferent feet of Ukrainian, Pakistani, Mongol, and New Kshatriya soldiers, among others. Two fronts now existed, and Montoya saw no reason to leave Forgan.

In less than two weeks' time, with the help of the townspeople and supplies from Liberal, they converted the Enco station into the New White House and built an impregnable bunker under its eastern wing. (The eastern wing was the garage.) These things done, they rechristened the city and held a three-day celebration in honor of the establishment of a new and thriving capital. Then, hoping to see to his own comfort during the trying days ahead, President Montoya dispatched Colonel Phillips, Chief Advisor Swearingin, and Bobby Gilby (the sixteen-year-old boy who had occasionally pumped gas at the Enco station) to go down the road in Bobby's '58 Ford pickup to the derelict U-Haul van and retrieve Thomas Jefferson's invaluable chifforobe for immediate installation in Montoya's otherwise austere bunker.

But as I said earlier, this story truly begins while the President was in the awkward process of trying to unstick the doors on his invaluable antique. Unmindful of both its antiquity and its spiritual congruence with the mind of Thomas Jefferson, Montoya was uttering imprecations of a singularly unpresidential nature and banging the carven facade of the cabinet with his elbow. His fatigues were wet because he had just driven back from Liberal in Bobby's windowless pickup during an especially severe Great Plains thunderstorm, and he desperately wanted his dressing-gown.

"....,!" The President said, frustrated.

At that precise moment, a dull wooden thumping above the President's head augmented the din of his intemperate elbowing

and swearing. A genuinely pious but never sanctimonious man, the President left off his exertions and blushed. He did not move. He asked silent forgiveness of three saints and wondered briefly if his nation's enemies had at last arrived. The dull thumping continued.

"Hank?" a voice called. "Hank, can I talk to you a minute?"

It was Swearingin. Henry David Thoreau Montoya y Florit rolled his eyes heavenward, exhaled a simultaneously relieved and exasperated sigh, and shouted, "Come on down, Marvin. Nobody here but me and Thomas Jefferson's red-eared ghost." After slipping back a heavy iron bolt on the trapdoor overhead, he sat down on his bed. The dampness from his fatigues seeped into his clean linen, but he was beyond caring.

Looking like a stork with an Oliver Cromwell haircut, tight bangs providing a blond fringe over the beak of his nose, Marvin C. Swearingin clambered through the trapdoor and stood in the middle of the President's bunker.

His clothes, like the President's, dripped. A bead of either perspiration, or rainwater hung just beneath the tip of his nose, threatening to elongate and fall. The President noted that in its deliquescent roundness the bead of water contained beautiful emeralds, and blues, and brandywine ambers, another entire universe pendant from Swearingin's nose. Montoya had to concentrate to restore to the man an identity beyond that as a water-bead bearer.

"Oh," he said, by way of concentrating. "It is you, isn't it?"

"Yes, sir." This was an exceptionally astute answer for the Chief Advisor. Although he had been the most brilliant man in the President's inner circle of aides, the retreat from Old Washington had done something to his mind.

"What do you want, Marvin?" the President said more tenderly.

"Our trip to Liberal, sir? I mean, that trip tells us—"

"Wipe your nose, Marvin." Marvin rubbed the back of his hand under his nose and the other universe dissolved into a colorless moistness along the Chief Advisor's knuckles. "Okay, Marvin, get on with it."

"Sir, this afternoon in Liberal we learned that the enemy forces from both the east and the west are closing in on us. For over a week we've seen the vapor trails of their aircraft, and now the foot soldiers are upon us. Their troops ought to converge on Forgan in two days' time. Two days' time, Hank."

Swearingin called the President alternately "Hank" and "sir,"

unaware of inconsistency.

Absently, President Montoya said, "Well, let's hope that the tracks match up and that somebody brings along a golden spike."

Chief Advisor Swearingin kept a disapproving silence. He stood rigidly at attention, dripping.

"Please relax, Marvin. You're making me nervous." Marvin's shoulders slumped. "All right. All right. Your expression tells me that facetiousness is out of order, and I grant you that. I agree wholeheartedly. But what is it—exactly—that you want of me? I'm tired. You should be tired. Can't we make this brief?"

"Yes, sir. I wanted to know what we're going to do."

"We're going to re-institute the draft, take our missiles out of mothballs, and shoot down the moon so that the fragments from the darkside fall everywhere but the Western hemisphere. Like shrapnel, Marvin."

"That wouldn't work, Hank. I don't think it'd work."

"Well, I'm certain that it's absolutely our best emergency plan—but I'm sure you have reasons for expressing doubts, Marv." Montoya took off his boots. "What would you advise? As Chief Advisor, of course."

"We've pretty much done what we had to, Hank," Swearingin said seriously. "I mean, with the whole world aligned against us we couldn't very well shoot off missiles to all corners of the globe. Impractical and immoral both, Hank. So we withdrew as we had to. You can't kill everybody, you know."

"I know." Montoya looked at the puddle his boots had allowed to form between his stockinged feet. "Nobody likes us anymore, Marv." He said this less as a lament than as a straightforward recitation of the facts.

"Oh," Swearingin said brightly, "I'm sure somebody likes us."

"Who?" The President's face was tight and brown, intent but somehow abstracted away from the question he so perfunctorily spat out. "Who's that, Marv?"

"Well," Swearingin said, his voice dulling appreciably, "somebody . . ."

Montoya got up and slapped the taller man on the arm. "Never mind that, Marvin. We've got today and tomorrow and maybe part of another day before the Huns are upon us, and I suggest that we make ourselves as comfortable as possible in the interval so that we'll be able to think the matter properly through. Okay?"

"Okay."

"Fine. Now do you think you can unstick the doors on my chif-

forobe?"

"I don't know, sir. What's wrong with it?"

"The doors. They're stuck."

"And you'd like to get them open?"

"That's right, Marv. In order to get inside."

"Well, it was probably the move that did it, the move and all the time it sat out there on Highway 61 in the U-Haul van. Changes in climate frequently affect furniture that way. I mean, we came from Old Washington where the humidity in the summertime can be quite high all the way out here to Forg—I mean, New Washington—where it's a good deal more arid. That's probably what made the doors stick. I'm pretty sure of it. Not to mention the age of the chifforobe, the sensitivity of the wood."

"No, let's not mention those things. Can you open it?"

"I don't know."

"Well, why don't you try while I get undressed and towel myself down?"

"All right, Hank."

President Montoya removed his fatigues, sponged down with a terry-cloth hand towel, and then, dressed only in a pair of tattered boxer shorts, changed the linen on his bed. Swearingin worked diligently at the face of the cabinet, leaning against it and attempting at the same time to pull it open with eight pressure-whitened fingers. Chief Advisor Swearingin grunted. He broke off two fingernails. Unconsciously echoing an earlier sentiment of the President, Chief Advisor Swearingin swore:

"....,!" he said. He said it louder than he meant to.

The President, sitting cross-legged on the bed, watched his Chief Advisor for several minutes and then offered a bit of arbitrary but well-intentioned advice—even though he, the President, had never been one to think his solutions viable and all other men's suspect.

"Why don't you try to pry open the door you're not leaning against?"

"Right!" Swearingin began pulling at the other door of the cabinet—with considerably more success. He lost no more fingernails in the crevice between the doors. "Say, Hank," he said, while engaged in the struggle, "no kidding. What're we . . . gonna . . . do? I mean, the armies of the . . . A.M.I. Alliance and the S.S.S. Pact Nations . . . they'll torture and hang us . . . if they find out who we are."

"Undoubtedly. And there's no time to grow beards, either."

"No, there isn't," Swearingin said. He stopped struggling with the chifforobe. He turned toward the President, his brow corrugated with the perplexity of latter-day world affairs. "What're we going to do, Hank?"

Montoya looked at his hands. "Well, seeing as how we can't shoot, I'd say negotiations were in order, wouldn't you?" The President immediately regretted the use of the word *negotiations* because it called up a remote, unfocused light in Chief Advisor Swearingin's eyes. The man's brow unwrinkled momentarily, then resolved itself into ridges again.

"Negotiations?" he said.

"In Old Washington we could never arrange them—even though you did your damndest to get everyone around a table. That's why it's come to this, I'm afraid." Montoya sat quietly for a moment, musing. "What I wouldn't give to have old Valerie Podgornitsyn of the Triple-S Nations and cagey little Gamil Yosef Economous of the A.M.I. Powers right here in this room!"

"Why would they come here, Hank? They've got us on the run."

The President looked up, smarting from the sting of his Chief Advisor's innocent directness. "Why indeed?" he said.

"I don't think you can depend on that," Swearingin was saying. "Their coming here to negotiate, I mean."

"You're right, Marv. We can't depend on that."

"Do you want me to try to open the chifforobe again?"

"Please."

Chief Advisor Swearingin approached the Jefferson antique again, but this time he went about the task of opening it a little more methodically. He knelt and put his ear to the cabinet. With the heel of his fist he tapped the seam where the two doors came together. He listened. He was like a man sounding a watermelon or trying to crack a safe. With the heel of his other fist he again tapped the fissure between the chifforobe's doors.

"Umm," he said.

"What is it?"

"It sounds empty," Swearingin reported.

"Well, it *is* almost empty, Marvin. All I've got in there is a dressing-gown. A dressing-gown I'd very much like to put on before my simple paranoia turns into a complicated case of pneumonia."

"It sounds even emptier than that."

"It would be hard to sound emptier than that." Because he was about to go to bed, the President suddenly shifted his line of

questioning. "Look, Marv, have you seen Endgame recently? I don't want him down here if he's wet."

"No, sir, he's not wet. He's in the gara—I mean the east wing, chewing on the old tubeless tire Billy gave him. You should've stopped to see ole E. G. when we got back from Liberal. He only chews tires when he feels resentful."

"Poor Endgame." Swearigin glaced over at the President reproachfully. "No, no, I mean that, Marv. I'm sorry I didn't stop to see him. Send him down here when you're through. Okay?"

"Okay." There was a sudden bursting rush of air—inward, it seemed, rather than outward—and the chifforobe stood open. "Through!" Swearigin announced.

President Montoya had looked up just in time to see the doors burst open and the inward-sucking breeze lift the bangs on the left side of the Chief Advisor's head. He put his legs over the edge of his bed and leaned forward.

"My dressing-gown's fallen," he said. He looked at the crumpled yellow garment on the floor of Thomas Jefferson's erstwhile wardrobe and felt the cold seep into the soles of his feet. "Would you hang it back up for me, Marv—so that the wrinkles'll work themselves out? The President of the United States can't go around looking like Shirley Booth in *Come Back, Little Sheba*." He tried to recall the last time he had seen an old movie on television, but Swearigin straightened up with the dressing-gown and faced him.

"There's no coathanger, sir. I can't hang it up."

"What?"

"There's no coathanger."

"But it was hanging on a coathanger, Marvin. Look around."

Chief Advisor Swearigin put his head into the chifforobe and revolved it on his supple, storklike neck. "No, there's no coathanger, Hank."

"Damn it all!" the President said, going across the bunker to see for himself. "Did Phillips, that lousy dog-soldier, come down here and take my coathanger while we were gone? Is that why this thing was stuck?"

"I don't think so, sir. Feisty spent the morning with the Gilby family. He's been trying to talk them out of their storm shelter so he'll have a bunker of his own. A military bunker. He's offered Billy's father a battlefield commission and an option on the motor in the U-Haul van."

"Then where's my coathanger? It was the only one I had."

"Do you want me to go up and see if Mrs. Gilby's got an extra one? When she had me for supper the other night, she said Billy never uses them, anyway."

"All right, Marv. Go see if you can borrow one."

Swearingin clambered awkwardly out through the trapdoor, and the President of the United States stared disconsolately at the enigmatical emptiness of his chifforobe and wondered how many more days he would be able to hold the highest office in the land. Disconsolately, he grinned. Disconsolately, he put on his wrinkled dressing-gown.

"My kindgom for a coathanger," he said.

§ § §

At 0330 hours the President of the United States awoke to the ferocious, jaw-snapping barking of his Irish setter Endgame. A small night-light burned in the one electric outlet they had built into the wall of the bunker, and by this dim illumination Montoya could see Endgame beyond the foot of his bed first snarling and then grr-woofing at the ominously shadowed bulk of the Jefferson chifforobe. The dog's oafish voice echoed inside the cramped bunker like a succession of cherry bombs in an empty swimming pool; and Montoya, shouting, could scarcely make himself heard.

"Endgame! Endgame, get over here!"

The dog finally came to him. It sat beside his bed facing the cabinet and making guttural canine threats in its sleek throat. The President stroked the animal's head. He whispered soothing words.

But among the members both of the presidential staff and the Old Washington press corps Endgame had a reputation for cowardice that was proverbial, and Montoya himself was more unsettled than he cared to admit by the dog's bristling hackles and uncharacteristic ferociousness. (How many times, after all, had the *Washington Post* run a photograph of Endgame cowering away from his food dish while a contemptuous blue jay sat alertly on the dish's edge, its beak closed on a water-logged nugget of Gravy Train?) Montoya was intimidated—slightly—by the darkness and by the dog's behavior. He was intimidated—a little—by the chifforobe. The chifforobe possessed an aura of humble self-satisfaction, an aura of amenable patience: uncanny attributes in a piece of furniture. In fact, the President found himself thinking the cabinet a living creature. He half-expected it to stump toward him on its squat, meticulously carved Queen Anne legs.

Perhaps both he and Endgame had fallen down a rabbit's

hole—a white rabbit's hole.

The President pulled his dressing-gown about him and put his feet on the cold floor. Gently taking up the slack in Endgame's choke collar, he restrained the dog and continued to talk to it, as much for his own benefit as the animal's.

The chifforobe did not move—but it bulked in the shadows like something living and now the President believed he could see a faint bluish light emanating from the seam where the doors came together.

"*Carramba*," he said under his breath, knowing there was nothing for it but to get up and investigate. A chill of an altogether different sort displaced his awareness of the chill seeping up through his feet. He pulled Endgame toward the seemingly humming wardrobe and the otherworldly light. The dog, however, had suffered an acute relapse of its former character; it pulled backward on the chain, whimpering. "Endgame!" the President said. "Endgame!" His voice sounded hollow, and the dog tried desperately to slip the collar over its narrow mahogany-red skull.

If I survive this, Montoya thought, and if our enemies imprison me, I will ask Podgnornitsyn and Economus to let me keep a parakeet in my cell.

He opened the doors of the chifforobe.

That a medusa with snaky hair and cinderlike eyes did not turn him at once into a slab of unpolished granite mildly surprised him. But as the doors came open, Endgame broke free and disappeared under the President's rumpled cot. He watched the dog go, then turned back to the cabinet.

Its interior did seem to be suffused with a rarefied illumination of some kind—but more than likely this was simply a function of the night-light's glow and the glossiness of the lacquered oak. But since when did one lacquer the *inside* of a clothes cabinet? And besides, Montoya recalled, the Jefferson antique had been treated and restored, but never subjected to the ignominy of a crude lacquering. Wherefrom, then, this subtle but subtly rich lambency?

He put out his hand and closed it on—a coathanger.

No wonder in that, however; it was one of Mrs. Gilby's coathangers. Chief Advisor Swearingin had brought it into the bunker at the same time he delivered Endgame into the President's care. A *simple explanation for everything*, Montoya thought, forgetting the conundrum of the sheen inside the chifforobe; *no need for alarm*. He threw the coathanger on his bed and winced at Endgame's startled, monosyllabic yap.

Then he found the other coathanger—the one that had been missing that afternoon when Chief Advisor Swearingin managed to pry open the cabinet's recalcitrant doors.

President Henry David Thoreau Montoya y Florit trembled with something more than the cold. He wondered if Endgame would bite him if he attempted to appropriate a small bit of room under his bed. *I am a sensible man—less stable than before our retreat from Old Washington perhaps, but more stable than most men in similar circumstances would be. There is a rational explanation for the unexcused absence and sudden reappearance of this coathanger. Yes, rational.* He stood in front of the open chifforobe staring at the other coathanger and trembling almost imperceptibly with uneasiness and resentment. *What rational explanation could there be?*

"Please identify yourself," the coathanger said.

The coathanger spoke in English. The coathanger resonated so that its "voice" filled the entire chifforobe and gained a measure of amplification from the cabinet's volume. The coathanger burned like the filament in an Edison-era electric lamp, pulsing with each syllable.

President Montoya, a sane man, did what any sane man would have done in his circumstances. He got down on his hands and knees and looked under the chifforobe. He stood up and wedged his arm behind the cabinet, groping for a tape recorder's telltale cord or a concealed speaker outlet in the bunker's concrete wall. In the morning he would call a meeting and admonish his staff to halt the perpetration of this kind of senseless buffoonery; the country was undergoing a crisis of truly unprecedented proportions; and he, as both titular and acting head of the embattled U.S. of A., needed his sleep. Fuming with anger, Montoya groped and groped. He found nothing. He stood up and poked his head inside the cabinet, as Swearingin had done the previous afternoon. Deliberately, he refused to look at the coathanger from which, as he knew too well, the request to identify himself had come.

"Please," the coathanger said. "We're aware of your presence. No harm will befall you. Speak clearly into the cabinet and express your peculiar selfhood."

"On the contrary," Montoya said. "Express *your* peculiar selfhood!"

The coathanger fell silent for a few moments, as if considering this sternly inflected imperative, and then pulsed again with a

vague light, softer than before. "Very well. But first we must ask you to secure yourself inside the artifact wherein this makeshift transponder now hangs. To deny us this request will be not only to forfeit any expectation of an answer but also to terminate this communication altogether. Do you understand?"

"You want me to get inside the cabinet?"

"Please."

"Or you'll stop talking to me—forever. Is that right?"

"You comprehend the conditions for an extended colloquy quite well."

"Good. Now listen to this. I don't want an 'extended colloquy' with you. I particularly do not wish to crawl inside this chifforobe for the pleasure of said colloquy. What I want is, first, my sleep and, second, a degree of responsibility from the asses who've rigged this elaborate ruse. I am the President of the United States, and the people of this country have entrusted me with the trying but joyously undertaken task of saving their—I should say, *our*—collective necks. Whoever went to this trouble to make an ass of *me* is wasting valuable talents, talents that might well contribute to the end toward which we should all be working. If I knew who you were, you'd be shot. Now goodnight!"

And without looking back President Montoya returned to his bed, threw himself upon it, and turned toward the wall. Endgame whimpered but did not emerge from his hiding place. The doors of the chifforobe continued to stand open.

After a long, abashed silence the coathanger trembled with a tentative glow: "At any rate, you have given us a partial identification. Because of this concession and in spite of your intemperate crankiness, we have decided to overlook your initial refusal to enter the artifact. We hereby offer you a second chance to do so. Should you refuse again, all communication with us will immediately cease."

The President did not even look at the 'artifact.'

"Very well," the perfectly modulated voice inside the cabinet said. "If you fulfill our request, we will tell you what became of this wire implement while you thought it inexplicably vanished from the Earth."

His anger mounting, the President rolled over. "My coathanger? What did happen to my coathanger?"

"It vanished from the Earth. To you, inexplicably. Step inside this *chifforobe* (a quaint, dialectical word, we assume), and we will explain its disappearance."

Angrily, President Montoya leapt off his bed, made one long stride across the room, and closed himself up inside the cabinet, banging its doors to with an incredible viciousness. He squatted beneath the clothes bar and stared up at the faintly luminous coathanger. His voice boomed inside the chifforobe, forceful with previously repressed ire: "All right, you've got me. Now send someone down here with cameras and flashbulbs and document it for all time. I've got more important things to worry about than looking foolish before fools. Get it over with, damn you, and let me sleep! Or do you simply wish to keep me awake until New Washington's overrun by Economou's and Podgnornitsyn's troops?"

Again, the coathanger's reply came after a lengthy, taken-aback pause. "Very good. We counted on your innate curiosity to bring you into a more intimate conjunction with our improvised equipment."

"Ai, *Dios*, I'm curious all right. Who's *we*?" The President did not lower his voice. Outside, Endgame made weak moans. "And the word's not *intimate*, it's *cramped*."

"Thank you. We will make a semantical emendation to that effect. However, please do not speak so loudly; we receive you with ample lucidity."

"*Perdóname*. Very sorry, I'm sure."

"We are the Stronolanoneaux of the star system Marl of a necessarily unnamable galaxy in the galactic cluster which your astronomers know as the Hercules group. Currently we reside over three and half billion miles from you on the blissfully hospitable planet of Pluto, ninth from your sun."

"Pluto's a dead chip of ice. If you want this ruse to go any further, you'd better buy a reliable text and pull your heads together." His chin on his upward-jutting knees, the President said contemptuously, "'Blissfully hospitable!'"

"The heads of the Stronolanoneaux are perpetually together, President of the United States. 'Blissfully hospitable' is terminology which intimates the reformed nature of your ninth planet."

"Reformed?"

"Indeed. Reformed, that is, subsequent to our installation in the planet's sky of a surrogate solar secondary, a satellite of artificially contracted hydrogen which our expedition physicists ignited. They induced in this hydrogen, President of the United States, a self-sustaining meson resonance reaction."

"What?"

"To articulate it concisely, we have given Pluto a little sun, a sun about one-third the size of your own moon."

"Why?"

"No place of interstellar respite need remain desolate when it is so easy to provide the amenities of home. This sun will burn two thousand of your years. We, the Stronolanoneaux, will leave it for you to discover and name as you wish, upon our departure three standard days from now."

"You're going to persist in this masquerade three days?" Disconsolately, the President let his chin slip between his knees. Then he brought his head up and said, "Why would a people capable of creating artificial suns steal a poor imperiled outcast politician's last and only coathanger? *Dígame eso, por favor.*"

"Your last few syllables have no phonemic value to us; we will suppose them an idiosyncratic malediction unworthy of closer scrutiny. However, in the matter of the coathanger, we—"

"That was Spanish, you *hijos de . . .* Well, never mind. But it wasn't a curse, and your feigned omniscience has a few holes in it."

The voice responded after a brief pause: "Very well. Spanish. We have begun to render it intelligible; its syntax, at any rate, is considerably less convolute than this other. *Usted no tiene causa por creernos tocadores de toro.*" The President rolled his eyes upward as far as he was able, but said nothing. "As for your coathanger, we removed it through the process of teledemolecularization from your chifforobe; then, through photon-beam-retraction, we brought it the intervening 3,607,000,000 miles and reconstituted it in its original state as our basis for observation, preliminary hypotheses, and, ultimately, fullscale permutative extrapolation. These procedures completed, we returned the coathanger to you—minus the paper covering from the laundry—and positioned it in such a way as to make instantaneous transmission and reception a likelihood not readily susceptible to contravention. Only the retrieval and the return of the coathanger were accomplished at the irritatingly unexpeditious speed of light; consequently, it was gone not quite ten of your hours, an untoward amount of time and one for which we offer you our profoundest apologies."

President Montoya rubbed his eyes wearily. "Teledemolecularization," he muttered. "Permutative extrapolation . . . instantaneous transmission . . . irritatingly unexpeditious . . ." He let his voice trail off. Then he said, "And why would you settle upon my coathanger of all the coathangers in the world?"

"And why would you want it?"

"The Stronolanoneaux do not expend our efforts at contact on indigenous populations of only minimal intelligence. Nor do we believe in plunging physically all the way through the several planets of a solar system optimally constituted to possess higher-level intelligence in order to find it. The result is often waste. Therefore, we establish a base on the outermost planet and focus telemonitored sensor scans on the likeliest planetary body in the system. In your case, President of the United States, we found that a tension field of extreme sensitivity and independence emanated from the artifact wherein this then unfathomed 'coathanger' had its transient domicile. The coathanger was a palpable wrongness in so residually 'intelligent' a container. For over two weeks our probe maintained its exclusive focus on the chifforobe, which was then itself contained by a larger container—then, without preamble, the position of the chifforobe was altered and hardened a negligible degree against our observations."

"You're right," the President said. "Phillips, Swearingin, and Billy took it out of the U-Haul van and moved it into this bunker for me. Everybody in New Washington's aware of that."

"Yes. But to forestall the effects of its undergoing another transferral, perhaps to a place of total inaccessibility, we decided to act at once—therefore, the retraction of the coathanger. The cabinet itself would have been too prodigiously bulky an object to retract, over such a distance, via teledemolecularization. In any case, from the coathanger and from the cumulative evidence of our sensor scan we were able to extrapolate—deduce, you would say—the cabinet's existence. Then, after the more thoroughgoing processes of permutative extrapolation, we returned the coathanger. The Stronolanoneaux, President of the United States, are not unprincipled brigands."

"Wait a minute. Your little game's getting complicated. Let me see if I've been following you correctly. First, you settled upon my chifforobe because it seemed possessed of an after-image, so to speak, of intelligence. Second, you removed the coathanger because it was physically impossible to take the cabinet itself. And third, you deduced from the coathanger the existence of almost our entire civilization, inclusive of the English language but excepting Spanish."

The coathanger chuckled. "Yes. Until we had heard a few words of the latter system, that is." Another chuckle. "On Marl IV our inferior species of humanity, the Frenzilli, have an old proverb:

'From a single fact the great-minded Stronolanoneaux can deduce the entire universe.' Awe provokes them to overstate the case, President of the United States, but through permutative extrapolation we do indeed work small wonders from a finite number of facts.

"From the coathanger we have made well-informed projections about the level of your technology, the morphological development of your species, the weight you give to material as opposed to spiritual cognition (and vice versa), and the psychological derangements attendant upon, as well as the meteorological conditions conducive to, the wearing of clothes. The syntax and the vocabulary of your language we deduced from the slogan on the coathanger's wrapper: 'The Y.T. Blasingame Full Service Laundry and Dry Cleaners of Washington, D.C. We Get You Back on the Street, Looking Neat. Professional Alterations at Inalterably Low Prices.' "

"You didn't return that wrapper, by the way."

"Please forgive us. The wrapper was torn. We thought it of no significant value to the owner of the implement it enwrapped, and we hoped to keep the covering as a small memento of our journey to the, ah, 'Milky Way.' Do you wish its return?"

"It's yours, fellows. Be my guest."

"This graciousness is a meet attitude for the owner of an artifact so wondrously mind-haunted. So wondrously haunted by a *fine* mind, we should specify. You are the owner of the artifact, are you not?"

"Yes, I am."

"And did you not also create and personally effect the concretization of this artifact?"

"Did I design and make it, is that what you mean?"

"Indeed. Pointedly paraphrased."

"No, I didn't. Neither one."

The coathanger, trembling, considered this. "Who, then, among your otherwise limitedly endowed species, conceived the artifact you now possess?"

President Montoya, conscious of a vague tingling sensation in his buttocks, had begun very slowly to believe in the improbable protestations of the coathanger. What other reasonable explanation was there? If nothing else, the 'Stronolanoneaux'—whoever they were—had taken the time to devise a more consistent, albeit more improbable, explanation than anyone else in New Washington was capable of. Without thinking on the ludicrous

circumstances in which he now found himself, Montoya forthrightly answered the aliens' question. "Thomas Jefferson," he said. "The third president of the United States."

"Another president. You, then, are Thomas Jefferson's successor?"

"One of them, yes."

"He is dead?"

"Dead and gone."

"At what level of regard do the people of the United States hold the memory of this Thomas Jefferson?"

"He is regarded with the highest esteem."

"By you as well, successor to Thomas Jefferson?"

"Yes. Although there are always revisionists. A few of our historians have found it difficult to grant Jefferson the nebulous qualifier 'great' because like many other men of his time he kept slaves."

"And you?"

"Because of my own background, I see some validity in this line of argument."

Again the coathanger considered. At last it said, "Undoubtedly this Thomas Jefferson, whom you have succeeded, lived during a period of only incipient technological development. Slavery exists almost by universal edict during such periods, for it is technology which ultimately effects the complete supplantation of this barbaric practice—as both the Stronolanoneaux and the Frenzilli well know. Therefore, in spite of the revisionists, we the Stronolanoneaux beneficently grant your Thomas Jefferson the appellative prefix 'great'."

"That's very big of you. I'm sorry I'm not in complete agreement."

"Not?"

"Not completely. An opinion due in part to ethnic considerations. But I'm not a fanatic on the subject. In some ways I respect the man more than the hero worshippers ever could."

"We the Stronolanoneaux consider him great without reservations. It was the residual aura of his presence emanating from the chifforobe that dictated so great an expenditure of our time on the possibilities of your species. Therefore, we ask of you: What have you done to demonstrate your respect for the memory of this man?"

"I saved the chifforobe from imminent destruction by removing it from the historic city of Old Washington during time of peril."

The Stronolanoneaux on the other end of the coathanger said nothing. Then the perfectly modulated voice said, "Such action qualifies you, President of the United States and successor of Thomas Jefferson, as an entity worthy of our commiseration and succor. Your species cannot but benefit."

At this point President Henry David Thoreau Montoya y Florit of the embattled United States of America put aside his last remaining doubts about the identity of his midnight pranksters and talked with them as if their claim of alien origin were legitimate. What did he have to lose? Already he had made a fool of himself. Already he had sacrificed the better part of a precious night's sleep. He talked with these self-confessed 'aliens' for almost four hours. He explained global politics—how the entire world had come to be aligned against his nation for 'crimes' both real and imaginary; how, under Montoya's muddleheaded or self-righteous predecessors, the United States had abdicated not so much its pre-eminent position in world affairs as its own justifiable pride in its people's accomplishments; and how he, president for only eight months, felt a spiritually debilitating disgust for the retreat he had had no choice but to order. He tried to stir the sympathies of his listeners, but he did not lie. H.D.T. Montoya had not risen to the highest office in the land through lying, and even in adversity he refused to succumb to this final recourse of the incompetent.

At last, at the very end of their discussion, he extracted from the Stronolanoneaux a promise which he did not truly believe they had the power to fulfill.

At 0820 hours the coathanger had ceased to glow and Endgame had set up a persistent and reverberating din that rattled even the rafters of the gara—that is, the east wing of the New White House—overhead. In response to Endgame's barking and armed with a tire iron, Colonel "Feisty" Phillips led a party of five men, including Chief Advisor Swearingin and Billy Gilby, through the President's bolted trapdoor and into his private bunker. They battered their way in. And there the six members of the impromptu rescue squad discovered the chief executive of the United States scrunched up in Thomas Jefferson's beautiful chifforobe—sound asleep in spite of Endgame's bewildered barking.

"Well, I'll be damned," said Colonel "Feisty" Phillips reverently.

§ § §

By the same time the following morning the crisis had passed. It was another week before the last foot soldier of the two foreign

alliances disembarked for home—but only thirty-six hours after the President's conference with the Stronolanoneaux, the actualization of this foot soldier's departure was so certain that everyone in New Washington, U.S.A., with the sober but unjudging exception of Montoya himself, wore a beery glow as incandescent as the coathanger's had been. Mrs. Gilby even went so far as to permit Billy a sip of his father's imported California cider. And at the general celebration held that evening in the middle of Highway 61, President Montoya announced that the capital of the nation would remain in what had formerly been Forgan, Oklahoma. The crowd—all thirty-four constituent individuals of it—cheered enthusiastically.

The salvation of the nation befell in this wise:

At 2100 hours of the day following the President's conference with the Stronolanoneaux, a startled but quick-to-compose-himself Gamil Yosef Economous of the A.M.I. Powers materialized to the left of President Montoya inside the antique chifforobe.

The swarthy, mustachioed Economous wore a beige Continental suit and a pair of wire-rimmed, violet-tinged sunglasses, which, of necessity, he at once removed. The Stronolanoneaux had teledemolecularized him while he was engaged in a strategy session on the island of Corfu, one of the subsidiary headquarters of the A.M.I. Alliance, and Economous's first thought was that he had been abducted by a group of fanatically pacificistic Swiss terrorists. In Greek, Hebrew, and Arabic, he told President Montoya that none of his captors' demands would be met; that he, Economous, would die first; and that no evil so pernicious as self-righteous terrorism existed in all the known universe.

It took only twenty minutes for the Stronolanoneaux to apprise him, in perfect Greek, of the real nature of the circumstances and for Economous to accept this appraisal as the truth—or an appraisal as near to the truth as he could anticipate hearing. Then, for two or three physically disconcerting minutes, he and Montoya, scrunched shoulder to shoulder, smiled nervously at each other and waited for the arrival of Maharaja-Premier Podgornitsyn.

At approximately 2124 hours the Maharaja-Premier arrived.

Podgornitsyn was perhaps more surprised than Economous had been, for the Stronolanoneaux had teledemolecularized him out of a sound sleep in his secluded mountain villa in the Caucasus. Podgornitsyn habitually slept without benefit of pyjamas; and his first thought was not that he had been abducted by terrorists (the security precautions at his villa would have delighted Lavrenty

Beria of infamous days past), but that he had died and gone straight to the icy hell the guardians of his childhood had told him did not exist. Like Economou, he owed certain aspects of his psychological make-up to the vestigial influence of the Greek Orthodox Church. In President Montoya's chifforobe, without benefit of pyjamas, he shivered and, in shivering, set the chifforobe quaking on its quivering Queen Anne legs—for Valerie Podgornitsyn was a man well over six feet tall who weighed as much as Montoya would have if Billy Gilby had ridden Montoya piggy-back onto the scales.

The Maharaja-Premier recognized President Montoya and demanded, in English, an explanation. How was it that an *Americanski* had gained entrance to his own private hell?

At this point the Stronolanoneaux intervened, indicated to Podgornitsyn the presence of Gamil Yosef Economou, and explained that they had brought the three human beings together in the clothes cabinet of Thomas Jefferson for the purpose of 'substantive negotiations.' "It is abundantly evident to us," the coathanger told the two foreign dignitaries, "that you have not extended the new President of the United States sufficient opportunity to expound the nature of his own programs." To which Podgornitsyn replied,



"I do not talk in this condition!" And President Montoya, grateful for the chance to squeeze out from between the hairy flank of the Maharaja-Premier and the bony elbow of Gamil Economous, left the chifforobe briefly, gathered up the yellow dressing-gown from his bed, and returned with it to Podgornitsyn. The big man snorted, but stepped out of the cabinet and put on Montoya's skimpy garment. Then both he and the President, begging Economous's pardon, reassumed their positions in the quaking chifforobe and closed the doors behind them.

The substantive negotiations lasted five hours.

Then the Stronolanoneaux returned the visiting dignitaries to their homelands, and H.D.T. Montoya, President of the United States, was able to catch up on a little of his lost sleep.

§ § §

At 1220 hours of the day following the President's prolonged cabinet meeting, Chief Advisor Marvin C. Swearingin came through the broken trapdoor and made his way in the semi-darkness to his employer's bedside. He sat down on the edge of the bed.

"Hank?"

The President groaned, but opened his eyes.

"Hank, is it really true that Podgnornitsyn and Economous are going to withdraw their troops?"

"That's right, Marv." President Montoya sat up in his bed, resting his arms over the sheet that covered his knees. He yawned.

"Why would they do that? They had us on the run."

"The Stronolanoneaux threatened to teledemolecularize both of them again and photon-beam-retract them all the way out to Pluto."

Endgame came out from under the bed and allowed Chief Advisor Swearingin to stroke his sleek neck. But the Chief Advisor did so absently, his eyes focused on one of the upper corners of the bunker. "Doesn't it make you a little ashamed, sir, that we didn't get out of this mess on our own? I mean, back at Harvard I took a course in the classical theatre, and whenever one of those fellows like Euripides or Aeschylus had their characters in a bad situation and needed a happy ending, they always had a god come down in a chariot and save everybody. Doesn't it make you a little ashamed that that's what happened to us, sir?"

"Marvin, I take help from whatever quarter it comes. And there's no assurance that the current status quo will hold sway more than a year or two. The Stronolanoneaux are leaving

shortly. They're famous among their galactic neighbors, they told me, for interfering in other worlds' affairs, and they simply wanted to give us a chance to restore the balance of power here on Earth or else alter our methods of coexistence away from power politics. And those things, Marvin, we'll have to do ourselves."

"But still—"

"No, wait. There's another thing. The Stronolanoneaux responded to something noble in this nation's heritage, which itself is a part of the heritage of all mankind. It was not a deceitful *deus ex machina* that saved us, Marvin, but our own collective spirit as men."

"Oh," said Chief Advisor Swearingin, brightening.

"And if that doesn't satisfy your longing for a self-reliant resolution of the crisis, I'll tell you something else."

"What, Hank?"

"It won't happen again. The Stronolanoneaux are never coming back."

"Never?"

"No, the universe very seldom grants anyone three wishes. We were lucky to get one."

"I'd say. I thought we'd just about bought the farm."

"And do you know what the Stronolanoneaux told me just before they shut down our coathanger forever?"

"No, sir. What was that?"

"That they've *always* taken an abiding interest in the universe's underdogs."

Endgame had the last move. He licked the President's hand. Then, just as in the clincher of an old cowboy movie or Our Gang comedy, Endgame stalked across the room, squeezed under Thomas Jefferson's chifforobe, and put his paws over his long, mahogany-red snout.



TO BELL THE CAT

by Joan Vinge



The author has a degree in anthropology, which, she tells us, gives one a chance to look at human behavior from many fresh and varied perspectives—rather like science fiction. Mrs. Vinge is married to Vernor Vinge, who also writes science fiction; they live in Southern California.

Another squeal of animal pain reached them from the bubble tent twenty meters away. Juah-u Corouda jerked involuntarily as he tossed the carved gaming pieces from the cup, spoiling his throw. "Hell, a triad . . . Damn that noise; it's like fingernails on metal."

"Orr doesn't know the meaning of 'surrender'." Albe Hyacin-Soong caught up the cup. "It must be driving him crazy that he can't figure out how those scaly little rats survive all that radioactivity. How they ever evolved in the first place—"

"He doesn't know the meaning of the word 'mercy'." Xena Soong-Hyacin frowned at her husband, her hands clasping her elbows. "Why doesn't he anesthetize them?"

"Come on, Xena," Corouda said. "They're just animals. They don't feel pain like we do."

"And what are any of us, Juah-u, but animals trying to play God?"

"I just want to play squamish," Albe muttered.

Corouda smiled faintly, looking away from Xena toward the edge of the camp. A few complaints, hers among them, had forced Orr to move his lab tent away from the rest. Corouda was just as glad. The noises annoyed him, but he didn't take them personally. Research was necessary; Xena—any scientist—should be able to accept that. *But the bleeding hearts are always with us.* No matter how comfortable a society became, no matter how fair, no matter how nearly perfect, there was always someone who wanted flaws to pick at. Some people were never satisfied; he was glad he wasn't one of them. And glad he wasn't married to one of them. But then, Albe always liked a good argument—

"Next you'll be telling me that *he* doesn't feel anything either!" Xena pointed.

"Keep your voice down, Xena. He'll hear you. He's right over

there. And don't pull down straw men; he's got nothing to do with this. He's Piper Alvarian Jary; he's supposed to suffer."

"He's been brainwiped. That's like punishing an amnesiac; he's not the same man—"

"I don't want to get into that again," Albe said, unconvincingly.

Corouda shook his head, pushed the blond curls back under his peaked cap and moved further into the shade. They sat cross-legged on the soft, gray-brown earth with the studied primitivism all wardens affected. He turned his head slightly to look at Piper Alvarian Jary, sitting on a rock in the sun; alone as usual, and as usual within summoning range of Hoban Orr, his master. Piper Alvarian Jary, who for six years—six years! Was it only six?—had been serving a sentence at Simeu Biomedical Research Institute, being punished in kind for the greatness of his sin.

Not that he looked like a monster now, as he sat toying endlessly with a pile of stones. He wore a plain, pale coverall sealed shut to the neck in spite of the heat; dark hair fell forward into his eyes above a nondescript sunburned face. He could have been anyone's menial assistant, ill at ease in this group of ecological experts on an unexplored world. He could have been anyone—

Corouda looked away, remembering the scars that the sealed suit probably covered. But he *was* Piper Alvarian Jary, who had supported the dictator Naron—who had bloodied his hands in one of the most brutal regimes in mankind's long history of inhumanity-to-man. It had surprised Corouda that Jary was still young. But a lifetime spent as a Catspaw for Simeu Institute would age a man fast . . . *Maybe that's why he's sitting in the sun; maybe he wants to fry his brains out.*

"—that's why I wanted to become a warden, Albe!" Xena's insistent voice pulled his attention back. "So that we wouldn't have to be a part of things like this . . . so that I wouldn't have to sit here beating my head against a stone wall about the injustice and the indifference of this society—"

Albe reached out distractingly and tucked a strand of her bound-up hair behind her ear. "But you've got to admit this is a remarkable discovery we've made here. After all, a natural reactor—a concentration of uranium ore so rich that it's fissioning. The only comparable thing we know of happened on Terra a billion years before anybody was around to care." He waved his hand at the cave mouth 200 meters away. "And right in that soggy cave over there is a live one, and animals survive in it! To find out how they could have adapted to that much radia-

tion . . . Isn't it important for us to find that out?"

"Of course it is." Xena looked pained. "Don't patronize me, Albe. I know that as well as you do. And you know that's not what I'm talking about."

"Yes, I know it isn't . . ." He sighed in surrender. "This whole expedition will be clearing out soon; they've got most of the data they want already. And then the six of us can get down to work and forget we ever saw any of them; we'll have a whole new world all to ourselves."

"Until they start shipping in the damned tourists—"

"Hey, come on," Corouda said, too loudly. "Come on. What're we sitting here for? Roll them bones."

Albe laughed, and shook the cup. He scattered the carved shapes and let them group in the dirt. "Hah. Two-square."

Corouda grunted. "I know you cheat; if I could just figure out how. Xena—"

She turned back from gazing at Piper Alvarian Jary, her face tight.

"Xena, if it makes you feel any better, Jary doesn't feel anything. Only in his hands, maybe his face a little."

She looked at him blankly. "What?"

"Jary told me himself; Orr killed his sense of feeling when he first got him, so that he wouldn't have to suffer needlessly from the experiments."

Her mouth came open.

"Is that right?" Albe pushed the sweatband back on his tanned, balding forehead. "Remember last week, he backed into the campfire . . . I didn't know you'd talked to him, Juah-u. What's he like?"

"I don't know. Who knows what somebody like that is really like? A while back he came and offered to check a collection of potentially edible flora for me . . ." And Jary had returned the next day with the samples, looking tired and a little shaky, to tell him exactly what was and wasn't edible, and to what degree. It was only later, after he'd had time to run tests of his own, that he had understood how Jary had managed to get the answers so fast, and so accurately. "He ate them, to see if they poisoned *him*. Don't ask me why he did it; maybe he enjoys being punished."

Xena withered him with a look.

"I didn't know he was going to eat them." Corouda slapped at a bug, annoyed. "Besides, he'd have to drink strychnine by the liter to kill himself. They made Jary into a walking biological lab—his

body manufactures an immunity to anything, almost on the spot; they use him to make vaccines. You can cut off anything but his head and it'll grow back . . ."

"Oh, for God's sake." Xena stood up, her brown face flushed. She dropped the cup between them like something unclean, and strode away into the trees.

Corouda watched her go; the wine-red crown of the forest gave her shelter from his insensitivity. In the distance through the trees he could see the stunted vegetation at the mouth of the reactor cave. Radiation had eaten out an entire hillside, and the cave's heart was still a festering radioactive sink hot enough to boil water. Yet some tiny alien creatures had chosen to live in it . . . which meant that this expedition would have to go on stewing in the sun until Orr made a breakthrough, or made up his mind to quit. Corouda sighed, and looked back at Hyacin-Soong. "Sorry, Albe. I even disgusted myself this time."

Albe's expression eased. "She'll cool down in a while . . . Tell her that, when she comes back."

"I will." Corouda rolled his shirtsleeves up another turn, feeling uncomfortably hot. "Well, we need three if we're going to keep playing." He gestured at Piper Alvarian Jary, still sitting in the sun. "You wanted to know what he's like—why don't we ask him?"

"Him?" Incredulity faded to curiosity on Albe's face, "Why not? Go ahead and ask him."

"Hey, Jary!" Corouda watched the sunburned face lift, startled, to look at him. "Want to play some squamish?" He could barely see the expression on Jary's face, barely see it change. He thought it became fear, decided he must be wrong. But then Jary squinted at him, shielding his eyes against the sun; and the dark head bobbed. Jary came toward them, watching the ground, with the unsure, shuffling gait of a man who couldn't find his footing.

He sat down between them awkwardly, an expressionless smile frozen on his mouth, and pulled his feet into position.

Corouda found himself at a loss for words, wondering why in hell he'd done this. He held out the cup, shook it. "Uh—you know how to play squamish?"

Jary took the cup, and shook his head. "I don't g-get much chance to play anything, W-warden." The smile turned rueful, but there was nothing in his voice. "I don't get asked."

Corouda remembered again that Piper Alvarian Jary stuttered, and felt an undesired twinge of sympathy. But hadn't he heard,

from somebody, that Jary had always stuttered? Jary had finally loosened the neck of his coveralls; Corouda could see the beginning of a scar between his collarbones, running down his chest. Jary caught him staring; a hand rose instinctively to close the seal.

Corouda cleared his throat. "Nothing to it, it's mostly luck. You throw the pieces, and it depends on the—"

Another mindless squall came from the tent behind them. Jary glanced toward it.

"—the distribution, the way the pieces cluster . . . Does that bother you?" The bald question was out before he realized it, and left him feeling like a rude child.

Jary looked back at him as though it hadn't surprised him at all. "No. They're just animals. B-better them than me."

Corouda felt his anger rise, remembering what Jary was . . . until he remembered that he had said the same thing.

"Piper! Come here, I need you."

Corouda recognized Hoban Orr's voice. Jary recognized it too, climbed to his feet, stumbling with haste. "I'm sorry, the Doctor wants me." He backed away, they watched him turn and shuffle off toward Orr's tent. His voice had not changed; Corouda suddenly tried not to wonder why he was needed . . . *Catspaw: person used by another to do something dangerous or unpleasant.*

Corouda stood up, brushing at his pants. Jary spent his time outside while Orr was dissecting: Piper Alvarian Jary, who had served a man who made Attila the Hun, Hitler, and Kahless look like nice guys. Corouda wondered if it were possible that he really didn't like to watch.

Albe stood with him, and stretched. "What did you think of that? That's the real Piper Alvarian Jary, all right. 'Better them than me . . . just a bunch of animals.' He probably thinks we're all a bunch of animals."

Corouda watched Jary disappear into the tent. "Wouldn't surprise me at all."

§ § §

Piper Alvarian Jary picked his way cautiously over the rough, slagged surface of the narrow cave ledge, setting down one foot and then the other like a puppeteer. Below him, some five meters down the solid rock surface here, lay the shallow liquid surface of the radioactive mud. He rarely looked down at it, too concerned with lighting a path for his own feet. Their geological tests had

shown that a seven-meter layer forty meters down in the boiling mud held a freakish concentration of fissile ores, hot enough once to have eaten out this strange, contorted subterranean world. He risked a glance out into the pitch blackness, his headlamp spotlighting grotesque formations cast from molten rock; silvery metallic stalactites and stalagmites, reborn from vaporized ores. Over millenia the water-saturated mass of mud and uranium had become exothermic and then cooled, sporadically, in one spot and then another. Like some immense witches' caldron, the whole underground had simmered and sputtered for nearly half a million years.

Fumes rising in Jary's line of sight shrouded his vision of the tormented underworld; he wondered vaguely whether the smell would be unpleasant, if he could remove the helmet of his radiation suit. Someone else might have thought of Hell, but that image did not occur to him.

He stumbled, coming up hard against a jagged outcropping. Orr's suited form turned back to look at him, glittered in the dancing light of his own headlamp. "Watch out for that case!"

He felt for the bulky container slung against his hip, reassuring his nerveless body that its contents were still secure. Huddled inside it, creeping over one another aimlessly, were the half dozen sluggish, rat-sized troglodites they had captured this trip. He turned his light on them but they did not respond, gazing stupidly at him and through him from the observation window. "It's all right, D-doctor."

Orr nodded, starting on. Jary ducked a gleaming stalactite, moved forward quickly before the safety line between them jerked taut. He was grateful for the line, even though he had heard the warden named Hyacin-Soong call it his leash. Hyacin-Soong followed behind him now with the other warden, Corouda, who had asked him to play squamish this morning. He didn't expect them to ask him again; he knew that he had antagonized Hyacin-Soong somehow—maybe just by existing. Corouda still treated him with benign indifference.

Jary glanced again at the trogs, wishing suddenly that Orr would give up on them and take him home. He wanted the safety of the Simeu Institute, the security of the known. He was afraid of his clumsiness in these alien surroundings, afraid of the strangers, afraid of displeasing Orr— He let the air out of his constricted lungs in a long sigh. Of course he was afraid; he had good reason to be. He was Piper Alvarian Jary.

But Orr would never give up on the trogs, until he either broke the secret code of their alien genes or ran out of specimens to work with. Orr wanted above all to discover how they had adapted to the cave in the geologically short span of time the reactor had been stable—everyone in the expedition wanted to know that. But even the trogs' basic biology confounded him: what the functions were of the four variant kinds he had observed; how they reproduced, when they appeared to be sexless, at least by human standards; what ecological niches they filled, with such hopelessly rudimentary brains. And particularly, how their existence was thermodynamically possible. Orr believed that they seined nutrients directly from the radioactive mud, but even he couldn't accept the possibility that their food-chain ended in nuclear fission. The trogs themselves were faintly radioactive; they were carbon-based, could withstand high pressures, and perceived stimuli far into the short end of the EM spectrum. And that was all that Orr was certain of, so far.

Jary clung with his gloved hands to the rough wall above the ledge as it narrowed, and remembered touching the trogs. Once, when he was alone, he had taken off his protective gloves and held one of them in his bare hands. Its scaled, purplish-gray body had not been cold and slippery as he had imagined, but warm, sinuous, and comforting. He had held onto it for as long as he dared, craving the sensual, sensory pleasure of its motion and the alien texture of its skin. He had caressed its small unresponsive body, while it repeated over and over the same groping motions, unperturbed, like an untended machine. And his hands had trembled with the same confusion of shame and desire that he always knew when he handled the experimental animals . . .

There had been a time when he had played innocently with the soft, supple, pink-eyed mice and rabbits, the quick, curious monkeys, and the iridescent fletters. But then Orr had begun training him as an assistant; and observation of the progress of induced diseases, the clearing away of entrails and blood, the disposal of small, ruined bodies in the incinerator chute had taught him their place, and his own. Animals had no rights and no feelings. But when he held the head of a squirming mouse between his fingers and looked down into the red, amorphous eyes, when he caught its tail for the jerk that would snap its spine, his hands trembled . . .

The ground trembled with the strain of pent-up pressures; Jary fell to his knees, not feeling the bruising impact. Behind him he

heard the curses of the wardens and saw Orr struggle to keep his own balance up ahead. When his hands told him the tremor had passed, he began to crawl toward Orr, using his hands to feel his way, his palms cold with sweat. He could not compensate for unexpected motion; it was easier to crawl.

"Piper!" Orr jerked on the safety line. "Get up, you're dragging the specimen box."

Jary felt the wardens come up behind him, and heard one of them laugh. The goad of sudden sharp memory got him to his feet; he started on, not looking back at them. He had crawled after the first operation, the one that had killed his sense of touch—using his still-sensitive hands to lead his deadened body. The lab workers had laughed; and he had laughed too, until the fog of his repersonalization treatment began to lift, until he began to realize that they were laughing at him. Then he had taught himself, finally, to walk upright like a human being; at least to look like a human being.

Up ahead he saw Orr stop again, and realized that they must have reached the Split already. "Give me some more light up here."

He moved forward to slacken the line between them and shined his lamp on the almost meter-wide crevice that opened across their path. The wardens joined him; Orr gathered himself in the pool of their light and made the jump easily. Jary moved to the lip of the cleft and threw the light of his headlamp down, down; saw its reflection on the oily, gleaming water surface ten meters below. He swayed.

"Don't stand so close to the edge!"

"Just back up, and make the jump."

"Don't think about it—"

"Come on, Jary; we don't have all day!"

Hyacin-Soong struck at his shoulder just as he started forward. With a choked cry of protest he lost his footing, and fell.

The safety line jerked taut, battering him against the tight walls of the cleft. Stunned and giddy, he dangled inside a kaleidoscope of spinning light and blackness. And then, incredulous, he felt the safety line begin to give... Abruptly it let go, somewhere up above him, and he dropped six meters more to the bottom.

"Jary! Jary—?"

"Can you hear us?"

Jary opened his eyes, dimly surprised that he could still see—

that his headlamp still functioned, and the speakers in his suit, and his brain . . .

"Are you all right, Piper?"

Orr's voice registered, and then the meaning of the words. A brief, astonished smile stretched Jary's mouth. "Yes, Doctor, f-fine!" His voice was shaking. The absurdity of his answer hit him, and he began to laugh.

"Get ahold of yourself; you're going into shock. What about the specimens?"

Jary breathed deeply, obediently, and looked down. He found himself up to his waist in steaming water. His legs would not respond when he tried to move them; for a moment he wondered if he'd broken his back. But his groping hands found thick mud thirty centimeters below the water's surface, and he realized that he was only trapped, not paralyzed. The specimen case drifted half-submerged, almost out of his reach. He lunged, caught the strap and pulled it back, floundering. The trogs inside had been shaken out of their torpor; their frantic scrabbling startled him.

"Well? What happened?"

Jary noticed that his lunge for the box had driven him deeper into the mud; the water was up to his chest now. "I've g-got it. But I'm st-st-stuck in the mud; I'm sinking." He glanced up at the external radiation meters inside his helmet. "Every dosimeter's in the red; my suit's going to overload f-fast." He leaned back, trying to see Orr's face past the convex curve of the cleft wall. He saw only a triple star, three headlamp beams far above him, shafting down between the vertical walls of the slit.

"Keep your head up so we can see you; we'll throw you down a line." He recognized Corouda's voice, saw the rope come spiralling down into his piece of light. "Tie it around your waist."

The end of the rope hung twisting half a meter above his head. He struggled upward, clinging to the wall, but his muddy gloves could not hold the slick fibers and he dropped back, sinking deeper. "It's too short. I c-can't do it."

"Then tie on the specimen case, at least."

"I can't reach it!" He struck at the rock wall with his fist. "I'm sinking deeper, I'll fry. G-get me out!"

"Don't thrash," Corouda said evenly, "you'll sink faster. You'll be all right for at least fifteen minutes in that suit. Find a handhold on the wall and keep it. We'll be back soon with more equipment. You'll be all right."

"B-but—"

"Don't let go of that case."

"Yes, Doctor . . ." The triple star disappeared from his view, and he lost track of the cleft's rim. He could touch both walls without stretching his arms; he found a low ledge protruding, got the specimen case and one elbow up onto it. Steam clouded his faceplate and he wiped it away, smearing the glass with water and mud instead. The trogs had grown quiet on the ledge, as if they were waiting with him. There was no sound but his own quick breathing; the trap of rock cut him off utterly from even the reassurance of another human voice. He was suddenly glad to have the trogs for company.

The minutes stretched. Huddled in his cup of light, he began to imagine what would happen if another earth tremor closed this tiny fracture of the rock . . . What would happen if his suit failed—Sweat trickled down his face like tears; he shook his head, not knowing whether he was sweating with the heat of the mud or the strain of waiting. His suit could have torn when he fell; the radioactive mud could be seeping in, and he would never know it. He had been exposed to radiation in some of Orr's experiments; it had made him sick to his stomach, and once all his hair had fallen out. But he had never had to see the flesh rot off of his bones, his body disintegrating in front of his eyes . . .

His numb hand slipped from the ledge, and he dropped back into the mud. He hauled himself out again, panting, sobered. He had too much imagination; that was what Orr had always told him. And Orr had taught him ways to control his panic during experimentation, as he had taught him to control his body's biological functions. He should know enough by now not to lose his head. But there were still times when even everything he knew was not enough. And it was then that he came the closest to understanding what Piper Alvarian Jary had done, and why he deserved his punishment.

He relaxed his breathing, concentrating on what was tangible and real: the glaring moon-landscape of the mottled wall before his face, the bright flares of pain as he flexed the hand he had bruised against the stone. He savored the vivid sensory stimulation that was pain, that proved he was alive, with a guilty hunger heightened by fear. The gibbous, mirror-like eyes of the trogs pooled at the view-window of the box, reflecting light, still staring intently through him as if they saw into another world. He remembered that they could, and turned his head slightly, uneasily. He froze, as the small, beslimed face of another trog broke the

water beside his chest; then two, and three . . . suddenly half a dozen.

Moving with a sense of purpose that he had never seen them show, they began to leap and struggle up the face of the wall—and up his own suit, as though he was nothing more than an extension of the stone. He stayed motionless, not able to do anything but stare as stupidly as his own captives. His captives—A trog dropped from his shoulder onto the ledge; they were all trying to reach the box. Had the captive ones called them here? But how? They were stupid, primitive; creatures with rudimentary brains. How could they work together?

But they *were* working together, clustered now around the box, some probing with long webbed fingers, the larger ones pushing and prying. They searched its surface with their bodies, oblivious to the light of his headlamp, as though the only way they could discover its nature was through their sense of touch. He remembered that they were blind to the segment of the EM spectrum that to him was visible light. He *was* only a part of the rock, in their darkness. And here in the darkness of the cave they were reasoning, intelligent creatures—when outside in the camp they had never shown any kind of intelligence or group activity; never anything at all. Why? Did they leave their brains behind them in the mud when they surfaced . . . ?

Jary wondered suddenly if he had lost his own mind. No, it was really happening. If his mind was ever going to snap, it would have happened long ago. And there was no doubt in his mind that these animals had come here for one reason—to free the captives from their cage. These animals . . .

He watched their tireless, desperate struggle to open the cage, knowing that it was futile, that they could only fail in the end. The captive trogs were doomed, because only a human being could open the lock to set them free. Only a human being—

His hand rose crookedly, dripping mud, and reached out toward the case, the trogs seemed to recoil, as if somehow they sensed him coming. He unsealed the lock, and pulled up the lid. The trogs inside shrank down in confusion as the ones on the outside scrambled over the ledge. "C-come on!" He pulled the box to him angrily and shook it upside down, watched their ungainly bodies spill out into the steaming water.

He set the case back on the ledge and clung there, his mind strangely light and empty. And then he saw the second circle of brightness that lapped his own on the wall, illuminating the

empty cage. He looked up, to see Corouda suspended silently from a line above his head, feet braced against the shadowed rock. He could see Corouda's dark eyes clearly, and the odd intentness of his face. "Need some help, Jary?"

He looked back at the empty box, his hand still holding onto the strap. "Yes."

Corouda nodded, and tossed him a rope.

Isthp: But we must contact these creatures. We have seen at last that they are beings, alien, but like ourselves; not some unknown force. They have mobiles with forms which can be known.

(Warm heavy currents billow upward)

(Mobiles rise together)

(Sussuration of thermal neutron clouds)

Mng: They have souls which can be reached. The shining mobile that released our captives, when all we did could not—we must contact that one's sessile, and make our problem known. These aliens must have space flight too, they are not native here. They can help us.

(My tendrils flatten)

(Golden-green carbonaceous webs)

(Bright gamma deepens to red as we rise)

Ahm: Our only problem is that these aliens wish to destroy us! That being did not truly shine with life—it was a cold creature of darkness, dripping warm mud.

(Silty currents, growing colder as this one rises)

(Soft darkness above, we rise toward darkness)

Mng: But its sessile realized our distress. It released your mobiles. It showed good will. We did not know of the aliens' true nature; perhaps they only begin to grasp our own.

(Silent absence of neutron flux)

Ahm: But how do we know they would leave us in peace, even then? We have sent our mobiles into the upper darkness to begin the ritual three times already. And three times they have attacked us viciously. We have only six months left. Our mobiles must complete the ritual in the soft upper reaches, or there will be no new sessiles. We are growing old; it takes time to focus the diffision, the obliqueness of a new young mind. We cannot wait until the next Calling.

(It grows softer, colder)
(The bright world dims around us)
(Grayed, delayed radiation)
(Only whispers from the neutron clouds)

Isthp: That is true. But surely we can make them understand . . . We must take the risk, in order to gain anything worthwhile.

(Cool sandy cross-currents)

Scwa: And what is there worth risking our wholeness and sanity for that we do not already have? We set out to colonize a new world—and we have done so.

(Darkness; dimming, whispering darkness)

(Soft atmospheric spaces, hard basalt)

Isthp: But we have not! We are trapped in this pocket of light, with barely room to exercise our mobiles, on a dark and hostile world. Every century our lifestance grows less. The ore concentration is only a fluke, undependable. This is not the world you wanted, one like our own that generates perpetual light, There is no future here.

(Crackling gusts of prompt neutrons)

(Swept upward, swept upward)

(Hold back, Swift One, wait for the rest)

Ahm: What do you propose, then? That we return to *our* world, where there is no room for us? That we should depend on these alien monsters to take us there?

(Darkness, blind darkness on all sides)

(Dim warm radiance of mud)

Mng: They are not monsters! They might help us find a better world!

(*****)

Kle: We are content here. We are colonists, not explorers; we ask only to be able to breed our mobiles together . . . *such pride, to feel the quickness of body, or the grace of supple fingers; to know that I have chosen the best to breed with . . .* and to meditate in peace.

(Mud-pools pulse with dim ruby radiance)

(Smooth basalt . . . and the rarified atmosphere of the upper reaches)

(I perceive that I shine in all my parts)

Mng: What is the point of breeding the finest mobiles, if they have no purpose? They build nothing for you, they contribute nothing—you are not a whole being; you are a debased breeder of pets. *To breed mobiles that can gaze upon the starry universe; that is truly beautiful.* If it were possible to breed mobiles like ours which ran the ship, which could perhaps see the true nature of the aliens from the upper darkness—that would be worthy. But we have no way to create anything worthy here.

(Crackling gusts grow dim and gentle)

(Push this mobile; currents slip)

(Bright depths below us now . . . they halo the mobiles of my radiant friend *Isthp*, Gamma-shine-through-Molten-Feldspar)

Ahm: Worthy—breeding artificial mobiles and building artificial machines? Machines that fail, like all ephemeral, matereal objects.

Bllr, Rhm, Tfod: Technician *Mng*!

Mng: After five hundred years, still you have not reconciled an accident. You are well named, *Ahm*, who is Darkness-Absence-of-Radiation.

(Begin first alignment)

(How they shine . . . how I shine)

(Shine against darkness)

(Shine)

Ahm: It was spaceflight that brought true Darkness into our lives. It is the purpose of the body's sessile to remain fixed, to seek the perfection of mind and mobile, not to tumble like a grain of silt through the nothingness between worlds.

(Cluster)

(Form first pattern)

(Gray-ruby gleaming mudpools)

Isthp: The 'nothingness' of space is full of light, if one has mobiles to perceive it. Strange radiation, that trembles in my memory still. Technology frees the sessile as meditation frees the soul. So do sessiles become the mobiles of God.

(All gather, to form the patterns)

(Heaviness of solid rock density)

(Beautiful to behold)

Ahm: Heresy. Heresy! Blasphemer.
(All gather, my mobiles)
(True breeding. Fine breeding.)

Mng: *Ahm*, you make me lose control—!
(*****)

Isthp: Peace, my beloved *Mng*, Cloud-Music. I am not offended. As our Nimbles differ from our Swifts, so do our very souls differ, one being's from another's. We were never meant to steep quietly in the depths, you and I.

(Gently, my Strong One, move with control)
(Vibration ripples lap the shore; mudpools settle)
(Pass under, pass through)

Mng: *Ahm*, you must think of the future generations—why do our mobiles answer the Calling now, but to create new sessiles, who will soon be breeding new mobiles of their own? Our space here will shrink as our numbers increase, and soon it will become like the homeworld . . . and then, much worse. We do not have the resources, or the equipment, or the time, to restructure our lifespace here. You are selfish—

(Stray whisper of the neutron breeze)
(Pressure shifts the rock)
(Tendrils brushing)

Zhek: *You* are selfish! You only wish to return to space, to inflict more danger and discomfort on us all, for the sake of your perverted mechanical-mobile machines.

(Subtle flow of color on radiant forms)
(First movement of receptiveness)

Scwa: *I remember dim blackness and killing cold . . . anguish in all my mobiles, as they bore my sessile container over the pathless world-crust.* We have suffered too much already, from the failure of the ship; we few barely reached here alive. I for one am not ready for more trials. *Mind the mobiles! Enter a new phase of the pattern . . .*

(All circle together)
(Weave nets of life-shine)
(The patterns multiply)

Rhm, Tfod, Zhek, Kle: Agreed, agreed.

Jary lay back on the examining table while Orr checked his body for broken bones and scanned him with a radiation counter. Out of the corner of his eye he could see the empty specimen box, still lying on the floor where Orr had dumped it when he entered the tent. Orr had kept him waiting while he talked with Corouda outside—but so far he hadn't said anything more about the loss of the trogs. Jary wondered how much Corouda had really seen—or whether he had seen anything. No one had ever looked at him the way Corouda had, at the bottom of the cleft . . . and so he couldn't be sure what it really meant.

"There's nothing wrong with you that's worth treating," Orr gestured him up. "Hairline fractures on a couple of your ribs."

Jary sat up on the table's edge, mildly relieved, pressing his bruised hand down against the cold metal surface. Orr was angry; he knew the way every line settled on that unexpressive face. But Orr might only be angry because he'd lost the specimens.

"Something else bothering you?"

"Yes—" he answered the graying back of Orr's head, because Orr had already turned away to the storage chests. "You l-let me fall. Didn't you?" He had found the muddy safety line intact, and the unfastened latch at the end.

Orr turned around, surprised, and looked at him. "Yes, I did. I had to release the rope or you might have dragged me into the crevice with you."

Jary laughed sharply.

Orr nodded, as though he had found an answer, "Is that why you did it?"

"What?"

"Turned the specimens loose. Because I let you fall—is that it?"

"No." Jary glanced unwillingly at the case on the floor. "I m-mean, it just c-c-came open; I told you. When it f-fell." The stutter was worse when he got nervous.

"Why didn't you tell me that immediately?"

"I didn't know!" His hands tightened on the metal; he slid down from the table.

"Stay there." Orr set a tray of instruments and specimen plates on the table beside him. "Those locks don't just 'come open'. You opened it, Piper, and let them go—out of personal spite."

"No." He shook his head, enduring Orr's pale scrutiny.

"Don't lie to me." Orr's expression changed slightly, as Jary's

face stayed stubborn. "Warden Corouda told me he saw you do it." No— The word died this time before it reached his mouth. His gaze broke. He looked down at his feet, traced a scar with his eyes.

"So." The satisfied nod, again. Orr reached out and caught his wrist. "You know how important those animals are. And you know how much trouble and risk is involved in bringing them back." Orr forced Jary's hand down onto the shining tabletop, with the strength that was always a surprise to him. Orr picked up a scalpel.

Jary's fingers tightened convulsively. "They'll g-g-grow back!"

Orr didn't look at him. "I need some fresh tissue samples; you'll supply them. Open your fist."

"Please. Please don't hurt my h-hands."

Orr used the scalpel. And Jary screamed.

"What are you doing in here, Orr?"

A sharp and angry woman's voice filled the tent space. Jary blinked his vision clear, and saw Warden Soong-Hyacin standing inside the entrance, her eyes hard with indignation. She looked at the scalpel Orr still held, at the blood pooling in Jary's hand. She called to someone outside the tent; Corouda appeared beside her in the opening. "Witness this for me."

Corouda followed her gaze, and he grimaced. "What's going on?"

"Nothing that concerns you, Wardens." Orr frowned, more in annoyance than embarrassment.

"Anything that happens on our world concerns us," Soong-Hyacin said. "And that includes your torture—"

"Xena." Corouda nudged her. "What's he doing to you, Jary?"

Jary gulped, speechless, and shrugged; not looking at Corouda, not wanting to see his face.

"I was taking some tissue samples. As you can see—" Orr picked up a specimen plate, set it down. "My job, and his function. Nothing to do with 'your world', as you put it."

"Why from his hands?"

"He understands the reason, Warden . . . Go outside and wait, Piper. I'll call you when I want you."

Jary moved around the table, pressing his mouth shut against nausea as he looked down at the instrument tray; he slipped past the wardens and escaped, gratefully, into the fresh air.

Corouda watched Jary shuffle away in the evening sunlight, pulled his attention back into the tent.

"If you don't stop interfering with my work, Warden Soong-Hyacin, I'm going to complain to Doctor Etchamendy."

Xena lifted her head. "Fine. That's your privilege. But don't be surprised when she supports us. You know the laws of domain. Thank you, Juah-u..." She turned to go, looked back at him questioningly.

Corouda nodded. "In a minute." He watched Orr treat the specimen plates and begin to clear away the equipment. "What did you mean when you said 'he understands the reason'?"

Orr pushed the empty carrying case with his foot. "I questioned him about the troglodites, and he told me that he let them loose, out of spite."

"Spite?" Corouda remembered the expression behind Jary's mud-spattered faceplate, at the bottom of the crevice. And Jary had told Orr that the lock had broken, after they had pulled him up... "Is that how you got him to admit it?" He pointed at the table.

"Of course not," irritation. Orr wiped the table clean, and wiped off his hands. "I told him that you'd seen him do it."

"I told you I didn't see anything!"

Orr smiled sourly. "Whether you told me the truth, or not, is of no concern. I simply wanted the truth from him. And I got it."

"You let him think—"

"Does that matter to you?" Orr leaned on the table and studied him with clinical curiosity. "Frankly, I don't see why any of this should matter to you, Warden. After all, you, and Soong-Hyacin, and the other fifteen billion citizens of the Union were the ones who passed judgment on Piper Alvarian Jary. You're the ones who believe his crimes are so heinous that he deserves to be punished without mercy. You sanctioned his becoming my Catspaw—my property, to use as I see fit. Are you telling me now that you think you were wrong?"

Corouda turned and left the tent, and left the question unanswered.

Piper Alvarian Jary sat alone on his rock, as he always did. The evening light threw his shadow at Corouda like an accusing finger; but he did not look up, even when Corouda stood in front of him. Corouda saw that his eyes were shut.

"Jary?"

Jary opened his eyes, looked up, and then down at his hands. Corouda kept his own gaze on Jary's pinched face. "I told Orr that I didn't see what happened. That's all I said. He lied to you."

Jary jerked slightly, and then sighed.

"Do you believe me?"

"Why would you b-bother to lie about it?" Jary raised his head finally. "But why should you b-bother to tell me the truth . . ." He shrugged. "It doesn't matter."

"It matters to me."

Something that was almost envy crossed Jary's face. He leaned forward absently to pick up a stone from the pile between his feet. Corouda saw it was a piece of obsidian: night-black volcanic glass with the smoothness of silk or water, spotted with ashy, snowflake impurities. Jary cupped it for a moment in his lacerated palms, then dropped it like a hot coal, wincing. It fell back into the pile, into a chain reaction, cascading a rainbow of colors and textures. Two quick drops of red from Jary's hand fell into the colors; he shut his eyes again with his hands palm-up on his knees, meditating. This time Corouda watched, forcing himself, and saw the bleeding stop. He wondered with a kind of morbid fascination how many other strange abilities Jary had.

Jary opened his eyes again; seemed surprised to find Corouda still in front of him. He laughed suddenly, uncomfortably. "You're welcome to play with my rocks, Warden; since you let me play squamish. B-but I won't join you." He pushed a rock forward carefully with his foot.

Corouda leaned over to pick it up: a lavender cobble flecked with clear quartz, worn smooth by eons rolled in the rivers of some other world. He smiled at the even coolness and the solidity of it; the smile stopped when he realized how much more that must mean to Jary.

"Orr lets me have rocks," Jary was saying. "I started collecting when they sent me to the Institute. If I held still and did what I was told, sometimes somebody would let me go out and walk around the grounds . . . I like rocks. They don't d-d-die," his voice cracked unexpectedly. "What did you really see, there in the cave, W-warden?"

"Enough . . ." Corouda sat down on the ground and tossed the rock back into the pile. "Why did you do it, Jary?"

Jary's eyes moved aimlessly, searching the woods for the cave mouth. "I d-don't know."

"I mean—what you did to the people on Angsith. And on Ikeba. Why? How could anyone—"

Jary's eyes came back to his face, blurred with the desperate pain of a man being forced to stare at the sun. "I don't remember."

I don't remember . . ." He might have laughed.

Corouda had a sudden, sickening double vision of the strutting, uniformed Jary who had helped to turn worlds into charnel houses . . . and Jary the Catspaw, who collected stones.

Jary's hands tightened into fists. "But *I* did it. I am P-piper Alvarian Jary! I am guilty—" He stretched his fingers again with a small gasp; his palms oozed bright blood like a revelation. "Fifteen b-billion people can't be wrong . . . And I've been lucky."

"Lucky?" Corouda said, inadequately.

Jary nodded at his feet. "Lucky they gave me to Orr. Some of the others . . . I've heard stories . . . they didn't care who they gave them to." Then, as if he sensed Corouda's unspoken question, "Orr punishes me only when I do something wrong. He's not cruel to me . . . he didn't have to make sure I wouldn't feel p-pain. He doesn't care what I did; I'm just something he uses. At least I'm useful—" His voice rose slightly. "I'm really very grateful that I'm so well off. That I only spend half my time cut up like a f-flatworm, or flat on my back with fever and diarrhea, or vomiting or fed through a tube or cleaning up the guts of d-dead animals—" Jary's hands stopped short of his face. He wiped his face roughly with the sleeve of his coveralls and stood up, scattering rocks.

"Jary—wait a minute." Corouda rose to his knees. "Sit down."

Jary's face was under control again; Corouda couldn't tell whether he turned back gladly or only obediently. He sat down hard, without hands to guide him.

"You know, if you wanted to be—useful . . ." Corouda struggled with the half-formed idea. "The thing you did for me, testing those plants; the way you can synthesize antidotes and vaccines. You could be very useful, working on a new world—like this one."

Jary gaped at him. "What do you m-m—" he bit his lips. "—mean?"

"Is there any way Orr would be willing to let you work for some other group?"

Jary sat silently while his disbelief faded through suspicion into nothing. His mouth formed the imitation of a smile that Corouda had seen before. "It cost too much to make me a b-biochemical miracle, Warden. You couldn't afford me . . . Unless Orr disowned me. Then I'd be nobody's—or anybody's."

"You mean, he could just let you go? And you'd be free?"

"Free." Jary's mouth twitched. "If I m-made him mad enough, I guess he would."

"My God, then why haven't you made him mad enough?"

Jary pulled his hands up impassively to his chest. "Some people like to l-look at my scars, Warden. If I didn't belong to a research institute, they could do more than just look. They could do anything they wanted to . . ."

Corouda searched for words, and picked a burr from the dark-brown sleeve of his shirt.

Jary shifted on the rock, shifted again. "Simeu Institute protects me. And Orr n-needs me. I'd have to make him angrier than he ever has been before he'd throw me out—" He met Corouda's eyes again, strangely resentful.

"Piper!"

Jary stood up in sudden reflex at the sound of Orr's voice. Corouda saw that he looked relieved; and realized that relief was the main emotion in his own mind. Hell, even if Orr would sell Jary, or loan him, or disown him—how did he know the other wardens would accept it? Xena might, if she was willing to act on her rhetoric. But Albe wasn't even apologetic about causing Jary to fall—

Jary had gone past him without a word, starting back toward Orr's lab.

"Jary!" Corouda called after him suddenly. "I still think Piper Alvarian Jary deserved to be punished. But I think they're punishing the wrong man."

Jary stopped and turned back to look at him. And Corouda realized that the expression on his face was not gratitude, but something closer to hatred.

§ § §

"All right, you're safely across. I'll wait here for you."

Jary stood alone in the darkness on the far side of the Split, pinned in the beam of Orr's headlamp. He nodded, breathing hard, unsure of his voice.

"You know your way from here, and what to do. Go and do it." Orr's voice was cutting; Orr was angry again, because Etch-amendy had supported Soong-Hyacin's complaint.

Jary reached down for the carrying case at his feet. He shut his eyes as he used his hand, twitched the strap hurriedly up onto his shoulder. He turned his back on Orr without answering, and started on into the cave.

"Don't come back without them!"

Jary bit down on the taste of unaccustomed fury, and kept walking. Orr was sending him into the cave totally alone to bring

back more trogs, to complete his penance. As if his stiffened, banded hands weren't enough to convince him how much of a fool he'd been. He had lost half his supper on the ground because his hands could barely hold a spoon . . . he would catch hell for his clumsy lab work tomorrow . . . he couldn't even have the comfort of touching his stones. Orr didn't give a damn if he broke both his legs, and had to crawl all the way to the cave's heart and back . . . Orr didn't care if he broke his neck, or drowned in radioactive mud—

Jary stopped suddenly in the blackness. What was wrong with him; why did he feel like this—? He looked back, falling against the wall as the crazy dance of his headlamp made him dizzy. There was no echoing beam of light; Orr was already beyond sight. Deliberately he tightened his hands, startling himself back into reason with a curse. Orr wouldn't have made him do this if he thought it would get him killed; Orr hated waste.

Jary pushed himself away from the wall, looking down at the patches of dried mud that still caked his suit. Most of it had fallen off as he walked; his dosimeters barely registered what was left. He started on, moving more slowly, picking his way across the rubble where the ledge narrowed. After all, he wasn't in any hurry to bring back more trogs; to let Orr prove all over again how futile it had been to turn them loose . . . how futile his own suffering had been; how futile everything was—

And all at once he understood. It was Corouda. "Corouda—!" he threw the word like a challenge into the blackness. That damned Corouda was doing this to him. Corouda, who had done the real act of torture . . . that bastard Corouda, who had pretended interest to draw him out, and then used false pity like a scalpel on his sanity: Telling him that just because he couldn't remember his crimes, he was guiltless; that he was being punished for no reason. Trying to make him believe that he had suffered years of hatred and abuse for nothing . . . No, he was guilty, guilty! And Corouda had done it to him because Corouda was like all the rest. The whole universe hated him; except for Orr. Orr was all he had. And Orr had told him to bring the trogs, or else— He slipped unexpectedly and fell down, going to his elbows to save his hands. Orr was all he had . . .

Isthp: We must make the shining mobile understand us. How shall we do it, *Mng*? They do not sense our communication.

(Thin darkness)

Mng: But they see us. We must show them an artifact . . . a pressure suit, perhaps; to reveal our level of technology, and our plight, together.

(Mudpools vibrate with escaping gases)
(Patterns of light)

Isthp: Exactly! I will rouse my second Nimble; it is my smallest, perhaps it can still wear a suit . . . *I summon* . . .

(Find the suit, and bear it upward)
(Weave the circle together)

Ahm: We will not allow you to do this. We are the majority; we forbid contact with the alien's mobile. We will stop you if you try it.

(Cold fluid lapping basalt)

Isthp: But its sessile is a creature of good will; even you must admit that, *Ahm*—it set your mobiles free.

(My patterns are subtle)
(Pulse softly and glow)

Ahm: *Great shining fingers reaching toward me . . . fear, hope . . . to set my mobiles free . . .* But the thing we must communicate is that we wish to be left alone! Let us use the shining mobile as a warning, if the aliens return again. It can make the invisible aliens visible, and let us flee in time.

(Draw in the circle)
(Draw in)
(Strange radiance)

Mng: No, we must ask more! Show it that we are an intelligent life form, however alien. We must seek its help to rescue us from this forsaken place!

(Close the net)
(Mobiles draw in)
(A light in the darkness)

Ahm, Scwa, Tfod, Zhek: No. No.

(Radiance, strange light)

Isthp: Yes, beloved friend Mng—we will have our freedom, and the stars: Look, look with all your mobiles; it shows itself! It shines—

(Strange radiance)

(Light flickering like gamma through galena)
(Hurry! Bear the suit upward)

Ahm: The shining one returns! Take care, take care—
(Patches of radiance flowing closer)

Blr: Break the pattern, prepare to flee. Make its light our warning.
(It shines)
(Prepare for flight)
(Prepare)

Mng: Make it our hope!
(Patches of radiance)
(It shines)

Echoes of his fall came back to Jary from a sudden distance; he guessed that he must be close to the main chamber already. He climbed to his feet, unable to crawl, and eased past the slick patch of metallic ore. It flashed silver in his light as he looked down, making him squint. The red path-markers fell away beyond it; he fumbled his way down the rough incline, half sliding, feeling the ceiling arch and the walls withdraw around him.

Here in the main chamber a firm, ore-veined surface of basalt flowed to meet the water-surface of the radioactive depths; here they had found the trogs. He passed a slender pillar bristling with spines of rose quartz, touched one with the back of his hand as he passed. In the distance he saw the glimmer of the water's edge, rising tendrils of steam. His stomach tightened, but he was barely aware of it: in the nearer distance the filigree of ore-veins netted light—and a cluster of trogs lay together on the shore. He swept the surface with his headlamp, saw another cluster, and another, and another, their blind, helpless forms moving sedately in a bizarre mimicry of ritual dance.

He had never had the chance to stand and watch them; and so he did, now. And the frightening conviction began to fill his mind that he was seeing something that went beyond instinct; something beyond his comprehension— But they were just animals! Even if they cared about what happened to their fellow creatures; even though they had risked death to perform a rescue . . . it was only instinct.

He began to move toward them, trying to flex his bandaged fingers, trying not to imagine the pain when he tried to keep his

hold on a squirming trog body. . . . He stopped again, frowning, as the trogs' rhythmic dance suddenly broke apart. The small clumps of bodies aligned, turning almost as one to face him, as if they could see him. But that was impossible, he knew they couldn't see a human—

A dozen trogs skittered back and disappeared into the pool; the rest milled, uncertain. He stopped, still five meters up the bank. They were staring at him, he was sure of it, except that they seemed to be staring at his knees, as if he were only half there. He risked one step, and then another—and all but two clumps of trogs fled into the pool. He stood still, in the beginnings of desperation, and waited.

His numb body had begun to twitch impatiently before another trog moved. But this time it moved forward. The rest began to creep toward him then, slowly, purposefully. They ringed his feet, staring up at his knees with the moon-eyed reverence of worshippers. He went down carefully onto one knee, and then the other; the trogs slithered back. They came forward again as he made no further motion, their rudder-like hindquarters dripping mud. They came on until they reached his knees, and began to pluck at his muddy suit-legs. He held himself like a statue, trying to imagine their purpose with a mind that had gone uselessly blank. Long, webbed fingers grasped his suit, and two of the trogs began to climb up him, smearing the suit with fresh mud. He did not use his hands to pull them off, even though his body shuddered with his awareness of their clinging forms. The dials inside his helmet began to flicker and climb.

He shut his eyes, "L-leave me alone!" opened them again, after a long moment.

Almost as if they had heard him, the trogs had let go and dropped away. They all squatted again in front of him, gazing now at his mud-slimed chest. He realized finally that it must be the radioactive mud they saw—that made his suit shine with a light they could see. Were they trying, in some clumsy way, to discover what he was? He laughed softly raggedly, "I'm P-piper Alvarian Jary!"

And it didn't matter. The name meant nothing to them. The trogs went on watching him, unmoved. Jary looked away at last as another trog emerged from the pool. He stared as the mud slid from its skin; its skin was like nothing he had ever seen on a trog, luminous silver reflecting his light. The skin bagged and pulled taut in awkward, afunctional ways as it moved, and it

moved with difficulty. All the trogs were staring at it now; and as he tried to get to his feet and move closer, they slithered ahead of him to surround the silver one themselves. Then abruptly more trogs swarmed at the edge of the pool; he watched in confusion as the mass of them attacked the silver trog, forcing it back into the mudpool, sweeping the few who resisted with it.

Jary stood waiting in the darkness while seconds became minutes, but the trogs did not return. Bubbles of escaping gas formed ripple-rings to shatter along the empty shore, but nothing else moved the water surface. He crouched down, staring at the tracks of wet mud where the trogs had been, staring down at his own muddy suit.

They weren't coming back; he was sure of that now. But why not? What was the silver trog, and why hadn't he seen one before? Why had the others attacked it? Or had they only been protecting it, from him?

Maybe they had suddenly realized what he was: not Piper Alvarian Jary, but one of the invisible monsters who attacked them without warning.

And he had let them get away. Why, when they had climbed his suit, begging to be plucked off and dropped into his box—? But they had come to him in trust; they had put themselves into his hands, not knowing him for what he was.

Not knowing him . . .

And from that moment he knew that he would never tell Orr about the rescue, or the dance, or the silver trog—or the way the trogs had gathered, gazing up at him. Their secret life would be safe with him . . . all their lives would be safe with him. He touched his muddy suit. Inadvertently they had shown him the way to make sure they could be warned whenever he came again with Orr. Maybe, if he was lucky, Orr would never see another trog—Jary closed his hands, hardening his resolution. Damn Orr! It would serve him right.

But what if Orr found out what he'd done? Orr might even disown him, for that: abandon him here. . . . But somehow the thought did not frighten him, now. Nothing they could do to him really mattered, now—because his decision had nothing to do with his life among men, where he lived only to pay and pay on a debt that he could never repay. No matter how much he suffered, in the universe of men he carried the mark of Cain, and he would never stop being Piper Alvarian Jary.

But here in this alien universe his crime did not exist. He could

prove what he could never prove in his own world, that he was as free to make the right choice as the wrong one. Whatever happened to him from now on, it could never take away the knowledge that somewhere he had been a savior, and not a devil: a light in the darkness . . .

Jary got to his feet and started back up the slope, carrying an empty cage.

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THE ASTRONOMICAL HAZARDS OF THE TOBACCO HABIT

by Dean McLaughlin



Resublimated thiotimoline, we must explain, is a highly improbable compound with the even more improbable property of dissolving shortly before being placed in water. Dr.

Asimov's papers on the subject are here augmented by an interesting letter brought to our attention by Dean McLaughlin, the son of a noted astronomer.

Dr. Isaac Asimov

Director: Thiotimoline Research Foundation

Trantor MA 31416

Dear Dr. Asimov:

You may recall that, some years ago, astronomers at a certain French observatory noticed the sudden, temporary appearance of potassium lines in the spectra of three otherwise quite ordinary stars. They interpreted these lines as evidence of powerful eruptions of ionized material on the surfaces of these stars—flares—which contained an unusual concentration of the element potassium.

But they weren't sure.

To begin with, each star had shown the lines only once. Each star was different from the others except for that one similarity, and none was a type that could be expected to display such behavior. And though the observatory set up a watch on these stars, none repeated the performance.

Those considerations didn't entirely rule out flares as an explanation. Flares can be brief and, for a given star, they can be rare. But unique events—especially three within a short time span—must be considered with caution.

Instead of publishing a report, therefore, the

French astronomers quietly inquired of other observatories around the world: had they, too, noticed anything unusual about those stars? Or similar stars?

No such luck.

But a group of California astronomers did come up with what seemed the answer. Having obtained a foundation grant—mostly for chalk and coffee, plus a few books of matches—they inquired whether perhaps the French astronomers might be victims of the tobacco habit. Most of them were. Well then, said the Californians, might it be possible that the Frenchmen had succumbed to the weed during business hours? Might they, perhaps, have struck matches while the curcial spectra were exposed, contaminating them?

Unchristian comments were heard from a certain French mountain top. The case seemed closed.

While I do not doubt the California group's work has identified previously unrecognized relationships surrounding the events, I am less certain their analysis correctly identified the true causal sequence. Rather, I suspect they remarked upon the one—perhaps too obvious—possibility, neglecting to consider others equally consistent with the available data.

Specifically, I believe it reasonable to suggest that, by striking a match on the telescope (or perhaps the wrinkle finish of the spectrograph housing) while in the act of photographing a star's spectrum, the star might be caused to emit a potassium flare. This hypothesis, if correct, would have a very interesting consequence: bearing in mind that the stars in question were all several hundred light years distant, meaning that the light recorded on the spectrum plates departed those stars several hundred years in the past, it follows that the act of striking the match "now" caused the star to emit its flare an equal number of hundred years previous.

I believe this interpretation of the data calls for thorough study. It is of interest not only for its own sake (basic research always pays off!), and for the light (sic) it might shed on the nature of time (and is it possible that in this process, the telescope is

functioning as a psionic device? Is it necessary for the spectrograph to contain a photographic plate?). There is also this very sobering question: if our astronomers, here, can cause such an event on distant stars, might it not be equally possible that astronomers in other solar systems—assuming they exist—could cause our own sun to similarly misbehave? (Bearing in mind, of course, they will not strike their matches until several centuries from now.)

Therefore, I enclose my formal research grant application to your Foundation.

I am confident you will view it with interest, inasmuch as your favorable response arrived in yesterday's mail. Most of the requested funds, you will note, will go for chalk, matchbooks, and coffee. Or possibly beer.

Sincerely yours,

Willem O. Kamm



Manuscripts and requests for information about our editorial needs should be sent, each with a stamped, self-addressed envelope, to Isaac Asimov's Science Fiction Magazine, Box 13116, Philadelphia PA 19101. We assume no responsibility for unsolicited manuscripts.

I DREAM OF A FISH, I DREAM OF A BIRD

by Elizabeth A. Lynn

The author of this story was raised in New York, lived eight years in the Midwest, and is now settled in San Francisco—joyfully so, she tells us. She holds an MA in English literature and a brown belt in Aikido, which she currently teaches. Her most recent, prior publication is "We All Have to Go", an SF/mystery short story in the MWA anthology, Tricks and Treats.

Forty miles off the coast, anchored in the sea floor, Vancouver stood.

It had been designed and built before the Change, for bored, rich land-dwellers to play in. Sixty years after the Change, it was a tower filled with refugees. Pictures in the library showed the abandoned land: brown, bleak, and ruined, with skeletal steel buildings twisted and broken across it, like the torn masts of wrecked ships. War, disease, famine, and madness had created that.

The names of the lost cities—New York, Boston, Ellay, Tokyo, Cairo, Capetown—and of the burnt lands, were a litany of lament in their history lessons.

Where the radiation levels let them get to it, the shards of steel engraving the gullied lands were City salvage—a needed, dangerous harvest.

§ § §

Illis swung on the handle of the door, and pushed. It opened grudgingly, silently, as he thrust his weight against it. Smooth metal felt cold on his palms. He slipped through the narrow space into the dark hallway. This made the fifth time he had sneaked out into the sleeping skyscraper, to climb the webway. He was not supposed to go out of the Children's Floor at night.

But it was hard to stay still in bed, when dreams left him with a dry mouth, twitching muscles, and visions winging through his brain.

He ran to the window at the end of the corridor, and looked

out—and down. Waves beneath him humped and bumped in dark, endless circles.

Nose against the cold glass, he looked east, towards land. On clear bright days he saw it, or thought he saw it. He dreamed about it: only in his dreams it was green, and there were birds. He had never seen a bird; there were none, but in his dreams they soared against the clouds in graceful spirals, making odd mewling sounds. *I want to be a bird.*

He had told his mother Janna about the birds in his dreams. "Maybe there is memory in your blood," she'd said. "I dream of birds, too."

"Have you seen one!"

But no, she had shaken her head.

He walked back down the hall. Set in the wall, like a mosaic or a painting, was the round, rainbow-colored webway door. Illis wiped his palms on his jumpsuit. "A climbing fool," Janna called him. She was one, too; she had taught him to climb. He liked sailing. He was good at handling the boats, careful and attentive, though he was only ten, and uncomfortably small for his age. But he was a City child, and his delight was in climbing.

Even on tiptoe, he couldn't hold down the release set at the top of the door. It was there on purpose, he well knew, so that small children could not finger it curiously and by mistake open the door. There was no one in the shadowy hall to stop him. He took a breath, and jumped for the release, holding with both hands, hanging from the handle, pulling it sideways with his weight. The door slid back. He looked down.

Imagine a spider, trapped in a long vertical pipe, spinning web after web at regular intervals from the bottom to the top of the pipe. Look down the pipe. You will see layer upon layer of web, until the layers blend to your eyes. Look up. It looks the same. Illis checked to see that there was no one on the net beneath him. Then he hooked his fingers over the rope that dangled from just inside the entrance.

He swung out, twisting around to touch the red button that opened and closed the door from the inside. Then he set his feet against the lip of the doorway and kicked off into the center of the web.

Falling—falling—sproong! He landed bouncing, curling his body like a ball to take the shock. The net bucked and quivered. He balanced on it and looked around for a "hole." There was one, a meter away. He slid easily through it, hung one-handed from the

rope next to it, and dropped. SPROONG.

The webway was playground, gymnasium, and stairway to the skyscraper city. Illis couldn't see why anyone bothered to use the lifts, except for going up. Climbing up on the webway, going up the knotted ropes, hauling himself back up through the holes, made his arms ache. But going down was like flying! He dropped again. That was three. The farther he got from his floor, the harder it was for him to get back there. The danger of being caught excited him almost as much as the webway itself.

Above him the door slid back.

Illis looked up, counting. Go in! he thought at the net-obscured form. Be lazy. Take the lift! But the person was not being lazy. Illis's jumpsuit felt suddenly tight and hot. He scuttled for the webway door and punched the inside button. The door opened and he swung through it. He pressed against the wall by the hole in the wall, listening to the steady descent. I'll wait till there's no one there, he thought. Then I'll get back on the web and I'll climb home, to the Children's Floor.

"What are *you* up to?" asked an amused voice above his intent head.

Illis looked up. Leaning over him was a very tall woman, with black hair and brown skin and amber eyes. She looked exactly like his mother. "Nothing," he said, and ducked under her arm. He ran down the hall. A door came slapping in front of him. He hauled on the handle with all his strength, and scooted inside. It smelled of soap, and fish. It was cold. He heard water running. Around him the tall bulk of machinery gleamed metal. He searched for a corner to hide in, careful as he went scrambling to keep his elbows in.

"Hey!" He shrank against a door. "Did you see a kid?"

A man's voice answered, through the sound of rushing water: "What would a kid be doing in here?"

"I chased one down the hall," said the woman. "Take a look around, will you? I'll check the refectory."

"Sure." Illis, crouching very still, heard her open the door. He looked cautiously for the source of the other voice. There he was—hosing down the floor. He doesn't look in a hurry to find me, Illis thought. Where am I? Around him, above him, hanging from pegs on the wall, were pots, pans, knives, cleavers, spoons, and forks as big as brooms, or almost. I'm in a kitchen, he realized. That's why it smells of fish. He listened again. The man was looking for him, not very hard, grumbling disbelief, rolling up the

hose. The man wanted to get home. I wonder where the freezers are, Illis thought, one ear towards the grumbles. And the stoves. His legs felt cramped. He stood up to ease them. He heard the door open, and close. Wait'll I tell mother I got inside a kitchen!

He found the freezers. They had dials and signs all over them, and even if he'd wanted to look inside, the handle was too far away for him to swing on it. He pictured fish from the farms in there, all frozen and silvery, like pieces of ice with eyes. He found a huge bin of dried kelp. He found the giant broilers; four of them, protected by steel-mesh gates.

I could climb over *these*.

He measured the gates with his eyes. The broilers sat silent, empty, mouths shut, DANGER! WHEN LIGHT FLASHES RED, BROILER IS ON! There were no flashing red lights. The broilers were off. I could even open the door, he thought. Easily, quietly, he climbed the fence. The broilers looked even bigger from close up. The button marked "Open Door" was sitting only centimeters above his head.

It was a freak of time, incalculable and unforeseen, that his finger on the button opened the broiler door just as that broiler—preset—began a self-cleaning cycle.

A red light flashed.

As the door gaped wider, the broiler shut itself off, and the door stopped moving—but not in time.

Illis's clothes flamed.

§ § §

They packed him round with ice before moving him to Medica.

"You're a mess," Lazlo, Senior Medic, told him. "Does it hurt?"

"No." Two amber eyes looked up at him. Christ! What am I going to do for him? Lazlo thought.

"Well, you have to stop climbing for a while," he said. "You got to stay in here and grow new skin." *Damned if I know where it's going to come from.* The boy had flung his left arm across his eyes. The skin round his eyes, his eyelids, his mouth and nose, a strip on his left cheek, and another strip on his left arm, remained untouched. Methodically he checked the IV tubing and the catheter. "Are you warm enough?" Already, under his light sterile gown, he was sweating.

"Yes." Something—laughter?—touched the boy's eyes. "That's funny," he murmured. Lazlo grinned at him with his eyes, over the top of his mask.

"Is it?" he said. "Good. You know how to call people if you want

anything? Good. There'll be people in and out of here all the time, and anyone you want to see, you tell us. You get to float in here, we call it the G-room, for a bit. Tomorrow we'll take you to surgery and remove all the old burned skin that's still sticking to you. You'll be all peeled. After that we'll take skin from your arm and your cheek and start growing it all over you."

"Grafts," Illis said, knowledgeably. He must know that word from Janna, Lazlo thought, with all her years of working here.

"Exactly. What you have to do now is, you have to move, and you have to eat."

"It's real easy to move in here," Illis said, looking at the gold-painted walls, the white net bed holding him, and the piles of machines humming in the corners of the small room.

"That's why you're in here, and not in a regular bed, in a room with regular gravity. We can increase the gravity in here, slowly, so that your muscles don't get weak. And you have to eat. Lots. Whatever you like, you tell us. You can have anything, anytime. You *must* eat."

"I understand," whispered the boy, staring at his raw, scorched flesh, from which fluid was leaking.

"I'll be in to see you every day."

A set of sealed doors with a tiny supply room between them kept Illis in strict reverse isolation. It was called the Lock. Lazlo inventoried the supplies as he went through it: sterile cloths, gowns, masks, gloves, bottles of fluids. The blood was in its freezer. For the thousandth time he praised the foresight of the first City generation, who had guessed how badly the city would need medical supplies. The hum of the air purifier filled the tiny room. He couldn't put it off. He opened the outer door and stepped into the corridor. Janna was waiting for him there.

Bright polished tools swung from loops on her hips. Every City adult worked part of the year on Maintenance. The glare of the sun through the window gave her the cut-away carved look of a mahogany figurehead. She saw his face—"It's bad," she said, before he could say it. And glared at him as if he were an enemy. "I want to stay with him."

"No," he said. "You can visit him—"

"You're an arbitrary absolutist son-of-a-bitch!" she said furiously. "Why?"

"It will upset him," he said reasonably. "And it will break you. If he asks to see more of you, we'll get Maintenance to set up a direct com-screen link, your room to G-room."

"I want to be with him," she repeated.

"What does he like to eat? Get me a list. Your pain will only distract him from healing. He *has* to eat, or he won't live long enough to grow new skin."

"I want to take care of him—"

"The City will take care of Illis. You want to help him—make me a list."

"Damn you!" she cried at him. "No, don't touch me! I'll make you a list."

§ § §

Janna was shaking by the time she reached her rooms. It was not *fair* to keep her from her son. Obsessively, she had pictured Illis dead a hundred times since his birth, from any one of a hundred birth defects—but never hurting, wasting and hurting! She paced and raged. *I taught Illis to climb*. She twisted in anger and guilt.

It was not *fair* . . .

His father had died of radiation poisoning. Had that been fair?

She had done it before. She knew the routine. She could sit with him, coax him to eat, change his dressings, regulate his fluids, . . . Maintenance would let her go. The beeper on her belt screeched at her. She fumed at it. Hadn't they heard, Illis was hurt? She was supposed to be in the soil lab, working on some defective wiring—but every adult in the City could use pliers! They could find someone to take her place.

You taught him to climb.

She had had six miscarriages before Illis. She was thirty-five, and likely not to have another child. If Illis died—the light on the com-screen was flashing. A neighbor, maybe, calling to console, to patter platitudes into her ears. I will have a seventh ghost face, she thought, to add to the six that anguish my dreams . . .

Don't give up hope—we will survive, Vancouver will survive—I *don't give a damn*, Janna thought. I don't care about the City—but my son is hurting—why? For what?

§ § §

Floating in the isolation of his room, Illis slept and ate, slept and ate more, replenishing the nourishment leaking from his flesh. He developed pneumonia, and recovered from it. He exercised, painfully. But at the end of two months he weighed twenty-nine kilos.

"His body's rejecting the secondary grafts," Lazlo said, in staff conference. "We expected it. Skin from the freezer or from donors

doesn't last very long. It's a temporary protection. But he seems to be rejecting it with uncommon swiftness—and there's too little of his own skin. It just isn't growing fast enough." Dressed in her Maintenance jumpsuit, jangling with tools, Janna sat at the table, making notes. Lazlo did not look at her as he talked.

"How about plastics?" someone asked.

Mitra, from Research, answered. "We've been using a laminated nylon dressing," she said. "And we are working now on an adaptive protein paint, to be used in all kinds of wound cases. But it's still experimental. Our supply of plastic is very limited, and anyway, the dressing lasts no longer than the secondary grafts. There's no substitute for skin."

Someone else asked: "What happens now?"

"We keep on," Lazlo said. "The boy's very tough. He may yet make it. We keep on."

After the others cleared out, Lazlo walked around to where Janna was sitting. "How are you?" he asked.

"I'm fine." She would not give an inch. Illis's condition has become a battleground on which we maneuver, he thought. "I am coming to work in the labs tomorrow," she said. "Perhaps they will find me something on which I can work off my obsession."

"Are you eating?" he persisted. "You look thinner."

"I!" She glared at him. Then she relented. Lazlo spent an hour every day in the G-room, talking with Illis, playing games to make him move, checking the too-few patches of new skin, changing the bio-adherent dressings. *Doing the things he will not let me do.* "I'm all right, Lazlo. Thank you." She touched his hand. Then her spine straightened. She picked up her notes. "Maybe I will see you tomorrow," she said to him. "Tell me when I may be permitted to spend more time with my son."

§ § §

In the morning, Mitra took Janna to a table with a shelf and a bank of machines. The shelf had her name on it; as if, Janna thought, I had never been away. "You work here," Mitra said. She pointed at a stack of papers. "The problem's there. Read."

Janna ate dinner in the refectory in Medica that evening. Lazlo came to sit with her. "How're you doing?" he asked.

She grinned at him. "I'm eating."

It made him smile, and emboldened him. "I see you're dressed in whites," he said. "What are you working on? Something good?"

Her eyes gleamed out of her dark face, a look fierce as a predator's. "Skin," she said. "I'm working on skin."

Somewhere amid the piles of print-outs on her shelf was a fact or formula that would help Illis.

Working with epithelial cells grown in culture media, she sorted through a dozen experiments designed to stimulate or regenerate damaged tissue. She haunted her desk late at night; she dreamed about the helical collagen molecule. She plunged into the library to scour the pre-Change records on immuno-suppressive nutrient solutions, a way to counteract the rejector mechanisms that kept Illis from using her skin, Lazlo's skin, anybody's skin. Mitra, at her desk nearby, was working on her own project, the all-purpose protein paint. She wanted a substance—like synthetic insulin—which the City's bioengineers could make. Janna listened to her grumbles, in between her own. *Skin. I'm working on skin.*

Lazlo came from a late visit to the wards, one night, and saw her in silhouette against a western window. Summer sunset had left streaks of red and lavender across the sky. He went to her. "It's getting late."

Her voice was heavy with fatigue. "Yes."

"Illis gained weight this week," he said.

She turned around. "How much?"

"Almost two kilos."

"That's good."

"Two grafts on his left arm seem to be taking."

"That's good."

"Have you stopped at all today?" he demanded. "You're punchy! Come on, you're getting out of here. I'll help you close up." He went around the lab for her, turning off the lights. She leaned on him as they left. "Fool woman!" he said. Her shoulder blades winged sharply under his fingers, and there were dark hollows under her eyes. "Don't you *dare* get sick! How would I tell Illis?"

He took her to the refectory. She ate in absent-minded gulps, not looking at the food, fork and fingers moving like the claw of an automaton.

"What keeps you up so late?" Lazlo asked.

"New skin for Illis."

"You're not going to get anywhere if you don't sleep at night."

She looked directly at him. "I used to have nightmares when I slept," she said. "I dreamed about Illis, a dark little ghost face crying, going away from me, going to join the others. I hated to sleep alone."

"You don't have to sleep alone," Lazlo said.

"I don't dream that anymore. I don't dream at all anymore. I am a dream, Laz, a dream that the City is dreaming."

"I think you need to go to bed," Lazlo said.

She let him take her there.

§ § §

Janna woke in the night.

Her pillow smelled of Lazlo. The room smelled of sex and of growing things; some of her plants were blossoming. She had just dreamed, and the memory of pain had awakened her. She had dreamed that Illis had turned into a bright silver fish, and she had swallowed him. He swam into her womb, and all over again, she gave birth to him. She passed her hands across her belly. It was flat and muscular, smooth—of course.

What was the dream telling her?

Silver—her memory jumped to the lab, and Mitra holding up a test tube filled with silver liquid. "Promising," she had commented tersely. "Needs more tests." Janna stalked naked to the com-screen and punched out a number.

"Mitra? What were you playing around with this morning? A test substance for the paint? It was silver."

The screen said two short sibilant words, and then said something rude, and was silent.

Janna reached for clothes. The lab will be empty, she thought, seeing deserted City corridors, passengerless lifts, herself alone, private, unobserved in the vacant lab—doing what? I will know, when I get there, what needs doing. Detachedly she saw herself open the door, leave her room, walk quickly down the hall—I am a dream of the City, she thought. The City is dreaming me.

§ § §

Illis woke when the light went bright.

His mother was bending over him.

His mouth filled with questions. She had not come to visit him for ten days. "Hello," she said. Her voice was muffled in the fabric of the mask. He saw it stretch over her smile. "Hello, baby. You don't have to talk to me. Just lie back and watch."

He lay curious, feasting his eyes on her graceful movements, as she carried in a box through the door, and then knelt down by the inner door of the Lock, hands busy, head bent secretively. She had made the room heavy again. Painfully he pulled himself up in the bed to watch her. She saw him, and came to sit on the chair beside the bed.



"Look!" she commanded, and she pushed up the sleeve on her left arm with her right hand. "Look at my arm."

The skin along her left forearm was thickened and scaly, and it *glittered*.

"What—" Where it touched the dark of her own skin, it thinned away. He reached with his left arm, the good one, and touched the silver. It was warm and dry. "It's skin," she said.

"Is it real?"

"It's growing there."

"What's it made of?" He stroked it.

She chuckled, and watched his yearning face. "Fish scales. Mitra made it, in Research. It looks like paint, and it's made of protein, protein very like the components of your skin." She touched his left cheek with her gloved hand. "It's for you."

There was a loud click, and Lazlo's voice came into the room. "What's going on in there?"

Janna called out cheerfully, "I'm visiting my son!"

"At four in the morning?"

"Yes. And yes, I did jam the door. You aren't going to be able to get in here without screwing Illis's protective isolation all to hell." She walked over to the com-screen unit and did something to it. Then she came back to the bed. "That'll keep 'em busy," she said. "Hold still now. I want to look at you." She turned the light up, and pulled the netting away. The grafts looked better then they had ten days back—but there were still too few of them. Illis's bones poked up through the devastated body as if they were trying to climb out.

"I'm pretty ugly," Illis said.

"You're going to be pretty flashy soon," Janna answered. "I'm going to color you silver."

"Now?" Illis whispered.

"Now." She stepped to the box, and took from it an ordinary glass jar, filled with a thick silver liquid, and a prosaic brush. "I'm going to do one whole side of you," she said. "It'll be cold, at first, and then it will sink in. Which side shall I do?"

"My right one," Illis said.

Janna set her teeth, and began to slowly paint the irridescent fibrous material over the raw wounds on her son's body. He whimpered, but held still, as she dabbed his throat, chest, abdomen, and right side. She put down the brush and wiped her sweating forehead, and then continued, working down his groin and his right leg. "That's all," she said, as she brushed the paint over his heel, and she capped the jar with shaking hands:

"It is cold," he reported.

"It will pass."

"The cold is going away."

"Good." At last she was able to look at him. He looked like a starved harlequin. "It will itch," she warned him. "You'd better not scratch. Not even in your sleep!"

It took her a long time to unjam the door.

Lazlo was waiting on the other side. He grabbed her. "What did you do?"

"Go and look."

Careless of isolation procedure, he strode inside the room. Illis waved at him from the net bed. "What—what is it?"

She laughed, sagging against the wall, and held up her glittering arm. "It's the protein paint," she said. "I had a dream—and the dream told me something, Laz. I stole some. And then I burned myself, a third degree burn. I poured the paint on. It healed—like this, Lazlo. With no grafting, just like this!" She was crying. He grabbed her by the shoulders and shook her. One or two tears splashed his face.



From the bed, Illis watched with undiminished curiosity.

"You did this because of a *dream*! Blast you, Janna. How could you take such a risk!"

"For Illis," she said. And grinned. "Now I can stay with him."

"Ah, Christ!"

§ § §

The whole City heard the news, and waited. Lazlo became an unwilling daily reporter. The paint remained unchanged on the emaciated boy for two weeks. Three weeks. After twenty-two days, it began to grow along the right arm, up the collarbone, to meet the healthy skin growing down the neck. They installed a mirror at the foot of Illis's bed, so that he could watch. "It's growing," he said with wonder, flexing the elbow of his right arm, touching his shoulder with his finger.

"Yes," said Lazlo. "*Don't scratch.*"

With novel luxury, Illis wriggled in bed.

They patch-painted him all over. The new skin grew in faster each day. "Hey—will I be able to go home soon?" he asked his mother.

"Soon."

And Illis ate for three, watched the mirror, and wept when his new skin itched.

§ § §

When she came to get him, to take him home, Illis was standing at the window, looking up at the sky. She went to stand beside him. So close, one could see their kinship in the shape of noses and ears, the way their mouths were set, their amber eyes—only Janna's skin was a warm, dark brown, and Illis's shone bright, scaly, hairless, and delicately mottled, like the integument of an eel.

"What are you doing?" she asked him.

"Dreaming." He turned to her, intrigue in his eyes, looking like a quicksilver monkey. "I'm going to go there, someday," he said.

It was the City's dream—the return. "Sure you are," she said gently.

He danced a little, phoenix-brilliant in the summer sunlight. Her heart clenched.

"Have you been there?"

"No."

"Why not?" he demanded.

"The radiation level's too high. The only people who can go are those who've had their children, or who are sterile."

"Is it green yet?"

"No." It was still too early for renaissance. Throughout the City, desire fleshed a vision of plowable soil, drinkable water, rivers brimming with fish instead of chemical death. But the City scavengers would find rocks and steel, lichens, moss, and insects. The insects had re-inherited the earth.

"I *will* go." Illis said. "I will swim there." He grinned. "I am a fish, now."

"You are an imp."

He looked up again. "I dream about them," he said. "In the sky, with the sun shining on their wings. Next time, Mama—make me feathers. I want to be a bird."



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AHMM377

AUTHOR FIND

by Susan Casper

Hidden in the square below are the last names of 55 well known Science Fiction authors. Names may be printed backward, forward, up down or diagonally. It is usually a good idea to circle the names as you find them and to keep a list. A word list can be found on page 134; the solution on page 188.

Have fun!

C A M P B E L L I R R E M T O G N Y
O L U D L H O P V K Y A R B R O O E
N D A L I S A B E R H A G E N Y S R
Q I T R L C A R R D A U B I B R R F
U S U L K L K N N A L J U X E V E F
E S E A E E N Y E C D G I L P S D A
S W M I Y M W E A R E B D O I S N C
T I X H E E G N V L M N U O T E A C
S E F C S N L O O I A R Z R E C S M
I L L S N T M S B H N O S P Y N T L
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E X T N S S E J S Y E O D E L A N Y
R T Y N E T E R O O M H S I L B O B
G R E B I E L E I N S T E R J T O M

LOUISVILLE SLUGGER

by Jack C. Haldeman II



The author of this strange little adventure describes himself as having patches on his jeans, gray in his beard, and sand between his toes. He lives on the edge of a salt marsh in Bayport (population 9) on the Gulf Coast of Florida. He was once crazy enough to put on a World Science Fiction Convention, but seems to have completely recovered now. (Your editor, who suffered the same lapse just 12 years earlier, knows exactly how he feels.) Mr. Haldeman—his friends call him Jay—has been writing more or less full time, picking up occasional very odd jobs along the way; for relaxation he fishes, stalks the marsh with camera, and shoots pool in the local honkytonk. Currently, he is working on an SF novel, Nightmare Station.

Slugger stood helplessly as he watched the ball arc over his head and clear the center field fence. Four to three—it was all over. He dropped his glove to the ground and started the long walk back to the dugout. The sell-out crowd was silent. He shook his head. They'd lost it; lost everything—the game, the series. Now those ugly Arcturians had won the right to eat all the humans.

It was a crying shame.

Too bad Lefty had sprained his ankle rounding first.

The UN delegates milled aimlessly around in their special box seats. They looked depressed and Slugger couldn't blame them. They were all overweight and would surely be among the first to go.

Well, he had gone the distance and that was the important thing. *How* you play the game is everything. Coach Weinraub always said that.

He hated going to the showers after losing a game. There was none of the joking around and towel snapping that followed a win. Maybe there would be a cold beer. That would be nice. He wondered absently who they *would* eat first.

The locker room was depressing—no beer at all, only warm Cokes and stale popcorn. He dressed quickly and slipped out the back door. The Arcturians were probably spraying each other with champagne.

He arrived at the Blarney a few minutes later. Usually he didn't go there, but tonight he wanted to go someplace where he wasn't known. He wasn't aware that his face was more widely known than the President's. He ordered a beer.

The bar was dirty and dark and the ruddy-faced bartender was the only one who could get a good look at his face. Luckily he was sympathetic and didn't let on that he recognized Slugger.

"Damn shame," said a man at the other end of the bar.

"Yeah, I wonder what Arcturians taste like. Do you know any-one who's eaten one?"

"My brother-in-law's in the Forces, and he says they taste like corned beef."

"Yuck. I wouldn't eat one in a million years. They look worse than maggots."

"You ever seen an algae production plant? That burger you're eating was a slimy green plant a week ago."

"That's different."

Slugger played with the water spots on the counter in front of him as he listened to their conversations. He wished Lefty was around and they could joke things up, break some of the tension. Maybe he should give him a call. He'd said he was going home to his wife, but maybe he'd come out for a beer. Maybe his ankle still bothered him.

"I bet you wouldn't eat one of them."

"I'm not sure. After all, they were going to eat us and it seemed like the only thing for us to do. Anyway, we lost the game, so we don't have to eat them. Why worry about it?"

"Yeah, the game. Buncha clowns."

Slugger felt his collar getting tight. He gripped his beer glass harder to keep his temper down.

"The umpire should've been shot. I hope they roast him on a stick."

"It wasn't the umpire, it was the team. They looked like a buncha girls out there. Did you see that bonehead play old Mandella made? They shoulda traded him years ago."

"They gave him an error, didn't they? What do you want? He was two for five."

"Lousy singles with nobody on. He struck out in the fifth with

the bases loaded."

"They had good pitching. Shut us out twice."

Slugger nodded to himself and ordered another beer. They did have good pitching. Have to hand it to them there. But hell, with six arms and twelve fingers on each hand, they *had* to have good control. A lot these bar-flies knew. They should have had to face those curve balls that dipped *just* right.

"You're all wet. We blew it—blew it real bad. Lefty only had one hit and he had to FALL DOWN! An easy double, maybe three bases and with Pedro batting clean-up, man, that would have been the ball game. But no, he had to go and trip over his own shoelaces. Couldn't even get back to first. What a clown."

Slugger had had enough. They couldn't talk about his friend like that. With calculated slowness, he stood up and turned to face the men at the end of the bar.

"It coulda happened to anyone. Wasn't his fault."

"Hey look, it's Slugger."

"Throw the bum out."

"Fantastic! Ten for seventeen in the series."

"Bet the fix was on."

"Can I have your autograph, Slugger? It's for my kid."

"Buncha sand-lot bums."

Slugger turned to the nearest man and grabbed him by the collar, lifting him off the bar stool.

"It could have happened to anyone," Slugger repeated. "A bad day, that's all."

He sat the struggling man down, missing the stool and dumping him on the dirty floor.

"But this was the last one, Slugger. We *had* to win this one."

"You win some, you lose some, and some get rained out," said Slugger as he walked to the door, stopping only to autograph a baseball someone held out for him.

Outside, the streets were filled with celebrating Arcturians. They were running around with knives and forks in their multiple hands. Some wore bibs with humorous sayings printed on them.

Slugger started the long walk back to his apartment. Many of the Arcturians he met congratulated him on his performance in the series. Others pinched his arms and buttocks. He felt like half a cow hanging in a butcher shop window.

It was growing dark and a cold drizzle had started. A young boy wearing a tattered baseball cap was standing on the corner, sell-

ing evening papers with the headline: HUNGRY FOR A WIN, THE
AWKS COP THE BIG ONE.

The boy approached him.

"Say it isn't so, Slugger."

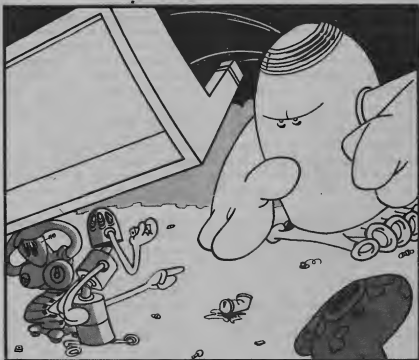
The great man just shook his head and crossed the street.

AUTHOR FIND SOLUTION LIST (see page 130)

- | | |
|---------------------------------|--|
| 1. ALDISS (Brian W.) | 29. LEIBER (Fritz) |
| 2. ANDERSON (Poul) | 30. LEINSTER (Murray) |
| 3. ASIMOV (Isaac) | 31. LEWIS (C.S.) |
| 4. BESTER (Alfred) | 32. MC CAFFREY (Anne) |
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| 6. BIXBY (Jerome) | 34. MILLER (Walter M.) |
| 7. BLISH (James) | 35. MOORE (C.L.) |
| 8. BOVA (Ben) | 36. NIVEN (Larry) |
| 9. BRADBURY (Ray) | 37. NORTON (Andre) |
| 10. CAMPBELL (John W.) | 38. POHL (Frederik) |
| 11. CARR (Terry) | 39. POURNELLE (Jerry) |
| 12. CHANDLER (A. Bertram) | 40. PURDOM (Tom) |
| 13. CLARKE (Arthur C.) | 41. RUSS (Joanna) |
| 14. CLEMENT (Hal) | 42. SABERHAGEN (Fred) |
| 15. CONQUEST (Robert) | 43. SILVERBERG (Robert) |
| 16. DELANY (Samuel R.) | 44. SIMAK (Clifford D.) |
| 17. DICK (Philip K.) | 45. SLADEK (John T.) |
| 18. DISCH (Thomas M.) | 46. SMITH (Cordwainer & George
George O.) |
| 19. DOZOIS (Gardner R.) | 47. STURGEON (Theodore) |
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| 27. LAUMER (Keith) | 55. YARBRO (Chelsea Quinn) |
| 28. LE GUIN (Ursula K.) | |

THE STEEL WORKS

by Chet Gottfried



SCHIRM 76

The author lives with his wife (one) and cats (three) in Queens. He supports the group by free-lancing, editing, proof reading, and some technical art work at Columbia University. His second novel is currently making the rounds, and other, shorter works of his have appeared in a number of publications. Mr. Gottfried also paints, plays chess, thinks of practicing his fencing, and has a bad tendency to draw newts.

The grease in my glass didn't satisfy me. Perhaps it was being in an unfamiliar bar. Or maybe it was something in the air. It could have been the mangled body. I glanced over to that section of floor. Clean as the smile of a Dreadnought-seven. Couldn't be prettier. But when you have an infrared set-up, you got it. Who cares if the body *isn't* there? It *was*. Nor was it the clean tracks of a fellow robot. Nope. It was a splattered mess—a human through the conveyor belt. Bits and pieces. Most of the infra was wiped out by other tracks—they cleaned it double fast. Only a couple of handprints to give it away. And those were fading. Easy to ignore. That is, easy if you didn't solve murders for a living. No one would pay me for this one. It was only a human. But when you solve murders often enough, it becomes a habit. Even fun.

I surveyed the scene: a bunch of hulks lined against the bar, a few pushing magnodarts, some in booths, others at tables, and a couple of big machines rattling dice. An okay bar. Red Bearing had several like these. A good cover. Rust, hoods, like everyone else, need some kind of tax write-off.

A couple of plates looked familiar. There was Patchface, one of Red Bearing's power jobs. He and I tangled a couple of times; some of his patches are my doing. I spit a couple of loose washers in a spittoon. Dead center. I wouldn't have it any other way.

I swilled some more grease. What was a human doing in a robot sector of town? And why dead? In answer to both questions, there were better places and better places. It didn't compute.

A Relaxer by the label of Betty wheeled by. She'd been seen with Patchface. Or so my 'banks told me. Wanting action, I made up my computer that today she'll be with me. Blocking her way with an extension, I offered her some crankcase. She flashed some reflectors and accepted. Show me a Relaxer that's faithful, and I'll show you a burned out hulk at the end of the street. Betty sputtered and I waited for Patchface.

After missing the target one too many times, he wheeled over. "What are you wasting your time with?" he said to Betty.

"Didn't see you," she explained.

"Here I am," said Patchface, and suddenly there was a lot of room at the bar.

"Bye, lover," Betty told me.

"Yeah. Good-bye. Only you forgot to tell Patchface that we're moving out. Goin' lubricate the town," I said.

Patchface glowed and tried to take Betty away.

I ripped off one of his patches. "Your grease is going thin," I

told him. "Your extensions are broken. You need help."

He did. He backed off. "Sure." He went to talk to his friends about this. On his way over to them, he passed the two Titans who were rattling the dice. Said a couple of words to them. One looked up. I nodded to him. It pays to be friendly to a Titan. In the meanwhile, the bar cleared out. Guess it was getting stuffy. But why care? Got a Relaxer, a drink, and a murder. Not everyone can say that. You can bet your tin on it!

I messed around with a couple of Betty's dials. She liked it.

"Let's go," she purred.

"It's too early," I told her.

"As long as you can keep wheelin'," she answered.

"Sure. No trouble about that. Hey Patchface!" I yelled.

"Rust off!" muttered a Titan. "Tryin' to concentrate."

As if a Titan ever did! In any case, let it pretend. "Hey Patchface," I said in a lower tone. "Who are your friends?"

"You'll find out soon enough," he said.

"I want to find out now."

"The more you know now, the more you'll forget," said the machine on his left, a small job. Too much oil.

"Not me." I polished some of my chrome. "I remember everything Red tells me."

"And what does Red have to say to you?" said Oily.

"That he wants to clean up. Get rid of the old hulks. Replace them with new," I said.

"New, huh?" Patchface, after inspecting his unused patch collection, picked out a new one and was pressing it on. "Must mean you. You're still shiny." The others laughed. "The steel's still shiny!"

Then there was a moment of silence, out of which came Patchface's soft voice, "What did Red say?"

I toyed with my grease before answering. "Come on over. Let's talk about it over some crankcase."

The three sauntered over. The oily one was called Fringe. The other hulk was Dynamo.

"Cute names," I said.

"We're cute machines," said Oily alias Fringe. "Give us some crankcase," he said to the bartender.

"Water is good enough for them," I said.

"Rust off," said Patchface.

"No one talks to me that way. Especially when they're off the junk heap," I said and removed a couple more of his patches.

Fringe and Dynamo backed away

"I want that shot of crankcase you promised. I'm going to get it," said Oily. "Understand!"

"I hear what you say," I replied. "And you heard what you'll get. *Understand . . . ?*"

Well. Maybe my talk wasn't that clear to them. In any case, they filed away, again going past the Titans.

"They'd rather play craps," I told Betty. "They're no good at magnodarts."

She sparked in pleasure—but looked worried.

Patchface heard my jab. "Yeah. We like to play. We don't go running after every new extension that comes out. Don't have the credits."

It was true. *I* had the equipment. When you live in a tough place, it paid. I could have taken apart the three with no problem. Rust. In a microsecond I can split into four separate machines, each better than Patchface or any of *his* crowd. They knew it. I knew it. They needed reinforcements. In the meanwhile, I could enjoy myself. I didn't let Patchface's remark go by.

"You have time enough for taking apart other equipment, but you don't know how to use it."

"What do you mean?" demanded Patchface.

"Flesh and blood, my friend," I said.

"Friend someone else," growled Oily.

I got some more grease for Betty and me. It was turning into a party. Betty quickly downed hers and excused herself.

"Sure," I said. "But not yet. It's becoming fun. Don't want you to miss a single thing."

"I think I've seen everything," she purred. "I have to go."

"Have you helped the Titan over there?" I asked her. "That should be some fun."

"Another time," she said.

"Want to leave with me?" I asked.

"Another time."

"What's with you, honey? You don't want to leave with either of the two most eligible machines. That just doesn't compute."

"Well . . ." She paused, and her Relaxer nature got the better of her fear. Yeah, fear. She didn't enter the bar till after I was there. But she knew about the murder. Enough to panic her. No. She wasn't going to leave. Not just yet. Besides, she was too busy giving eye messages to Patchface. Of course, I let her. I always believed in the value of communication. But Patchface had enough

of her. He swung her attention to the Titan who was rolling the dice. And why not? Patchface was in need of help. And if a Titan was willing to give it . . .

"That's some hunk of metal," I told Betty. She sputtered self-consciously. Relaxers have some code of their own. Supposedly, it says one at a time.

"Your idea, lover," she told me. "I have a power fixation."

"Yeah," I said. "Anything over two tons has its own way. Unless it's lead. Then all it can do is sink."

"Who you talkin' about?" rumbled the Titan.

"You got an admirer, kid," I told him. This was getting dangerous. A Titan could rip down a ten-story building and put up a twenty-story all in the same afternoon. It would make a great detective except what it had in gears it lacked in computers. Rust. That hulk would be much too dangerous otherwise. Which doesn't mean that such a combination didn't exist. It meant that no one ever talked about it afterwards.

"Who you talkin' about?" rumbled the Titan.

"No need to shout," I answered. While a Titan was alternately destroying and building, it had a speaker system that shouted above the racket.

"Don't push me, kid," said the Titan.

"Hey Cronus," said Patchface. "You never took that much from anyone else." That was true. But most hulks don't carry extensions like mine. Not that it made any difference to the Titan.

"Rust off." The dice rolled. "I'm sick of the lot of you."

The Titan wasn't willing to play. Too bad. I'd have to force him. "Cronus. Can you ignore this beauty of mine? That's not polite. You look like you could use a good Relaxer. Better for your circuits than rolling dice."

"What's wrong with my circuits?" demanded Cronus the Titan.

"Nothin' that a good Relaxer can't help," I said cheerfully. "Now Betty, here. That's what you need. Wouldn't you just like to crush her on your chest—"

The dice came at me pretty fast. Nevertheless, I caught them. Rust. If you're used to catching lead or shielding xasers, what's a die or two?

Was the Titan bothered that I caught 'em? Nope. "Give me back my dice," said Cronus.

"No thanks," I answered. "Try throwing something else. Something more your speed." Cronus heard, obeyed, and threw the dice table. It nearly took off Betty's head. She tried to leave again, but

I didn't want her to.

"You did better with the dice," I told Cronus. "Maybe you should try another set or come closer." Cronus came closer. "Good," I told him. "Now I don't have to shout."

"I want my dice back," said Cronus.

"Sure. It's a swell pair," I answered. "Human bone. Hardened. But still pretty fresh."

"What of it?" Cronus and I were a breath apart.

"Nothing. Except you're stupid," I said. "Which is nothing new for a Titan. You see a Relaxer and you grab. Smash. Blood and bone. Afterwards, cleaning up a mess isn't unusual for a Titan."

"Yeah," said Cronus. "And ripping apart a machine is a minute's work." He lifted me into the air. Why struggle? It wasn't my quarrel.

"Break the one machine that can help you?" I asked.

"Rust," said Cronus. But he put me down. He wasn't in a hurry, having proved a point.

"Check your 'banks. Why would a Red Bearing bar have a human? Hey Patchface!" I called. "How did Bearing get his nickname 'Red'?"

"Red likes to rust machines," said Patchface.

"You're sliding in your own puddle," I replied. "Red Bearing is a humie lover. Red for blood. Lets them pass as machines. You won't find that anywhere else. Hey Patchface!" No answer to that. And none expected. "You big hulk," I told Cronus. "And when Red gets here, what do you expect he'll do to you?"

Cronus wheeled over to Patchface. "What did you promise me!? You said it was okay!"

I wheeled out. Patchface's termination was no interest to me. I did what I wanted. The murdered human was one of Red Bearing's lovers. Killed by mistake. Patchface was keeping Cronus busy until the rest of the mob arrived. Then accounts would be totaled. I just speeded up the action. Fun.

The problem at hand was finding out where Betty vanished while Cronus was playing craps with me. I had one or two bars in mind. Neither of them was run by Red. That was okay with me.



THE SF CONVENTIONAL CALENDAR

by Erwin S. Strauss

A con, a science fiction convention, is a gathering of SF readers, authors, artists, and editors for a weekend of socializing, discussion, singing, trading, and movies. For further info, phone the numbers below. For a longer list, write: E. Strauss, 9909 Goodluck T2, Lanham, MD 20801, enclosing a stamped, self-addressed envelope.

- AggieCon**, March 24-27, \$4, Texas A&M Univ. (713) 846-4285
TotoCon, March 25-27, \$10, Manhattan, KS (913) 532-6881
LunaCon, April 8-10, Biltmore Hotel, \$8. The dowager queen of that breed apart, the New York City con. (212) 252-9759
BaltiCon, April 8-10, \$6, Hunt Valley, MD. The Hunt Valley Inn is a gorgeous con site. Last year, over 1000 came, many at their first con. A good place to start. (301) 661-2422
ConVoy. A mobile lounge shuttling between BaltiCon & LunaCon. \$30 for unlimited travel, including home pickup and dropoff (within 25 mi. of the DC/NYC route). (301) 794-7718
EratiCon, May 28-30, Houston, Texas (713) 944-3562
DisClave, May 27-30, \$5, Washington, DC. The Washington SF Association's annual do. Always very mellow. (703) 920-6087
Kwintus Kublius, May 6-8, \$8, Nashville, TN. Southern SF cons are noted for their conviviality. (615) 832-8402
WesterCon, July 1-4, \$6, Vancouver, Canada. In importance, 2nd only to the WorldCon itself. Masquerade. Box 48701 Station Benrall, Vancouver BC V7X 1A6, Canada.
Unicon, July 8-10, in Maryland near DC. (301) 794-7374
RiverCon, July 29-31, \$5 advance, \$10 at the door. Louisville, KY. Riverboat cruise on Sunday. (502) 636-5340
SunCon, Sept. 2-6, \$20, Miami Beach, FL. The WorldCon for 1977. Go to one or more smaller cons to prepare. 35th World SF Con, Box 3427, Cherry Hill NJ 08034.

by Charles N. Brown

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- Alyx* by Joanna Russ: Gregg Press, 1976; 265pp, \$12.50.
Venus Plus X by Theodore Sturgeon: Gregg Press, 1976; 160pp, \$8.50.
Babel-17 by Samuel R. Delany: Gregg Press, 1976; 158pp, \$9.00.
Solar Lottery by Philip K. Dick: Gregg Press, 1976; 188pp, \$9.50.
War of the Winged Men by Poul Anderson: Gregg Press, 1976; 160pp, \$9.00.
The Steel Crocodile by D. G. Compton: Gregg Press, 1976; 222pp, \$11.50.
The Battle of the Monsters edited by D. G. Hartwell & L. W. Curry: Gregg Press, 1976; 238pp, \$12.00.
Curious Fragments: Jack London's Tales of Fantasy Fiction edited by Dale L. Walker: Kennikat Press, 1975; 223pp, \$12.95.
Strange Horizons by Sam Moskowitz: Scribners, 1976; 298pp, \$8.95.
Rebirth by Thomas Calvert McClary: Hyperion, 1976; 181pp, \$3.50 (paper).
The Ghost Pirates by William Hope Hodgson: Hyperion, 1976; 276pp, \$3.95 (paper).
The World Below by S. Fowler Wright: Hyperion, 1976; 344pp, \$4.95 (paper).
Who Goes There? by John W. Campbell, Jr.: Hyperion, 1976; 230 pp, \$3.95 (paper).
Cloak of Aesir by John W. Campbell, Jr.: Hyperion, 1976; 254pp, \$3.95 (paper).
Bring the Jubilee by Ward Moore: Avon/Equinox, 1976; 222pp, \$2.25 (paper).
Needle by Hal Clement: Avon/Equinox, 1976; 207 pp, \$2.25 (paper).
The Crystal World by J. G. Ballard: Avon/Equinox, 1976; 160pp, \$2.25 (paper).
Behold the Man by Michael Moorcock: Avon/Equinox, 1976; 160pp, \$2.25 (paper).
The Judgement of Eve by Edgar Pangborn: Avon/Equinox, 1976; 159pp, \$2.25 (paper).

- Aniara* by Harry Martinson: Avon/Equinox, 1976; 193pp, \$2.25 (paper).
- First on Mars* by Rex Gordon: Avon/Equinox 1976; 192pp, \$2.25 (paper).
- Anatomy of Wonder* edited by Neil Barron: Bowker, 1976; 471pp, \$8.85 (paper), \$14.95 (cloth).
- Elric of Melniboné* by Michael Moorcock: DAW, 1976; UY1259, 160pp, \$1.25 (paper).
- The Sailor on the Seas of Fate* by Michael Moorcock: DAW, 1976; UY1270, 160pp, \$1.25 (paper).
- The Best Science Fiction of the Year #5* edited by Terry Carr: Ballantine, 1976; 367 pp, \$1.95 (paper).
- The 1976 Annual World's Best SF* edited by Donald A. Wollheim: DAW, 1976; UW1232, 304pp, \$1.50 (paper).
- Best Science Fiction Stories of the Year, Fifth Annual Collection* edited by Lester del Rey: Dutton, 1976; 206pp, \$8.95.

About five years ago, the academic community "discovered" science fiction. The library reprint houses issued several hundred facsimile editions, and I guess they sold well enough because some of the same publishers are back with new sets. The ideal library facsimile edition should be of an important book, unavailable in hardcover, printed on fine paper with a sturdy binding, and should have a critical introduction which tells us something about the author and why this particular work was reprinted. Each should reproduce the most complete text.

The Gregg Press series, edited by David G Hartwell and L. W. Currey, come closest to this ideal. The first series, issued in 1975, consisted of 20 books. Most were important in the development of science fiction. The 1976 series has 30 volumes, with many examples of outstanding modern science fiction. All are printed on acid-free paper, are handsomely bound, and have critical introductions by leading authorities in the science fiction field.

Of the seven examples I have on hand for review, *Alyx* by Joanna Russ is the most outstanding. It brings together, for the first time in one volume, the three early short stories about Alyx from *Orbit*; the novel *Picnic On Paradise* (Ace); and the story "The Second Inquisition," also from *Orbit*. There is a fine introduction by Samuel R. Delany about Russ, the book, and Delany's thoughts on fiction in general. The three early short stories (written in 1963-1965) are excellent examples of a literate type of historical sword & sorcery approached before only by Fritz Leiber. The

novel, a well written trek/conflict story, examines some rather strange characters and gives a glimpse of a decadent, future society. The final story, a time travel piece set in 1925, has some of the finest sensitive writing ever done in the SF field. It marks a major turning point in Russ's career as an author. The volume is well worth its high price.

Two other excellent volumes in the series are *Venus Plus X* by Theodore Sturgeon (1960) and *Babel-17* by Samuel R. Delany (1966). Both were trail-blazing novels when they first were published and are still outstanding today. The Sturgeon volume has a fine introduction by Paul Williams, which is well-written and informative. Both belong in any basic science fiction library.

The other four volumes on hand don't quite measure up. *Solar Lottery* by Philip K. Dick (1955) is a minor novel, as even Tom Disch points out in his introduction. It's of interest only as Dick's first novel. *War of the Winged Men* by Poul Anderson (1958) is not even outstanding Anderson, let alone outstanding science fiction. I had fond memories of it when I agreed to do the introduction, but found it very difficult to re-read. Anderson is a much better writer today. *The Steel Crocodile* by D. G. Compton (1970) is a good example of work by a vastly underrated writer, but is neither his best nor a pivotal novel. *The Battle Of the Monsters* edited by David Hartwell and L. W. Currey is a sampler of eight early American science fiction tales. "A Thousand Deaths" by Jack London (1899) and "The Repairer Of Reputations" by Robert W. Chambers (1895) are the only two I found of interest. Both are available elsewhere in more interesting single-author collections: the former in *Curious Fragments*, a collection of obscure London tales edited by Dale L. Walker; and the latter in the Dover paperback of *The King In Yellow*. For a complete list of the Gregg Press titles, write The Gregg Press, 70 Lincoln St., Boston MA 02111.

Sam Moskowitz is much maligned by critics and reviewers—especially academic reviewers who look down on anyone without academic credentials. Some of the criticism is justified. Moskowitz's prose is neither precise or inspired. He tends to overpraise items merely because they're obscure and to draw unqualified conclusions from very hazy data. His virtue is an uncanny ability to ferret out obscure data and material. *Strange Horizons* is a collection of 11 articles about science fiction, many revised from earlier magazine appearances. Nearly every one contained facts new to me. Moskowitz is at his best when discussing a

specific person, such as Virgil Finlay or S. Fowler Wright in this book. His articles on general themes in science fiction are not as good.

Sam Moskowitz pioneered the library reprint series in 1974 with a 28 volume set of early science fiction for Hyperion Press. It was a good set and, unlike the other sets, was issued simultaneously in cloth and paper editions. Hyperion has now issued an additional 19 titles in cloth and paper. Unlike the first set, these do not have substantial introductions; they make do with a short blurb instead. The five paperbacks sent for review are well bound; on good paper; and, unlike most library reprints, are reasonably priced. The set covers the first three decades of the twentieth century. *Rebirth* by Thomas Calvert McClary (1934) is a minor, badly-written, after-the-catastrophe novel. *The Ghost Pirates* by William Hope Hodgson (1909) is a weird fantasy. It's well written but does not belong in a "Classic of Science Fiction" series. *The World Below* by S. Fowler Wright is a classic and, unlike many classics, is still readable, interesting, and surprisingly well written despite its age. This edition is an omnibus volume containing *The Amphibians* (1924) and its sequel, *The World Below* (1929). It starts out like *The Time Machine*, but Wright's far future world is richer and more varied than Wells's. This is probably the outstanding science fiction novel of the twenties.

John W. Campbell is generally credited with starting the modern era in science fiction as editor of *Astounding*. He was also the first writer of the new era, with various stories published in the thirties under the pen-name of Don A. Stuart. Hyperion has reprinted two volumes of these stories, *Who Goes There?* (1948) and *Cloak Of Aesir* (1952) with the original Campbell introductions. These two volumes are certainly a cornerstone of modern science fiction and belong on everybody's shelf. If you want a complete descriptive list of the Hyperion reprint series, write Hyperion Press Inc., 45 Riverside Avenue, Westport CT 06880.

The Avon/Equinox "SF Rediscovery" series isn't quite a library reprint series, but it comes close. The books included are supposed to be masterworks both famous and forgotten. They are issued in large size paperbacks, kept continuously in print, and sold only through bookstores. The seven titles I have on hand are pretty much of a mixed bag. Two, *Bring the Jubilee* by Ward Moore (1955) and *Needle* by Hal Clement (1949), are genuine classics. The Moore book, a novel set in a world where the South won the Civil War, has a level of writing far ahead of its day. The Clem-

ent novel, a very successful blend of SF and detective fiction, has one of the most intriguing aliens in science fiction. Two others, *The Crystal World* by J. G. Ballard (1966) and *Behold The Man* by Michael Moorcock (1968), are good examples of the so-called "New Wave". Both rely heavily on complex writing and images, and both are only partially successful. A shorter version of the Moorcock was a Nebula Award winner. *The Judgement of Eve* by Edgar Pangborn (1966) is a well-written novel set in the early days of the post-catastrophe world which Pangborn used to greater effect in *Davy*. It's an interesting character study but is pretty thin for a whole book. The other two books on hand are losers. *Aniara* by Harry Martinson (1956) is an English translation of a Swedish, book-length poem. I found it unreadable. *First On Mars* by Rex Gordon (1957) is a dull Robinson-Crusoe-on-Mars novel.

I've devoted a lot of space to reprints this issue because science fiction, unlike mainstream fiction, rarely becomes dated. Half or more of the SF books published in any given year are reissues of earlier works; and they sell just as well, if not better, than the newest books. *Anatomy of Wonder* edited by Neil Barron annotates about 1,200 books, has recommendations for a core collection, and includes various essays on science fiction. After reading some of the descriptions and evaluations, I wonder if they're talking about the same books I remember. But overall, the book is useful and well organized. The softcover edition seems to be just as sturdy as the hardcover and is a better looking book.

Somewhere between old and new books is a much smaller field of rewritten books. Michael Moorcock created something of a stir in the early Sixties with his "Elric" stories, a combination of sword & sorcery, psychology, and archetypal references. He has been rewriting, re-editing, and adding new material to these stories for a definitive, six-volume edition. The first two, *Elric of Melniboné* and *The Sailor on the Seas of Fate*, have now appeared; on the whole, it's been worth the wait. The 1976 Moorcock is a much better writer than the 1960 Moorcock, and a good series has become an excellent one. I'm looking forward to the next four volumes.

There are four collections published each year that claim to be the "best" of the preceeding year. Obviously, if the editors were discerning enough, all four would have the same contents. They don't, of course, since nobody can agree on what's a "best" story. I have only three of the *Best* anthologies on hand—*The Best Science*

Fiction of the Year, #5, edited by Terry Carr; *The 1976 Annual World's Best SF* edited by Donald A. Wollheim; and *Best Science Fiction Stories of the Year, Fifth Annual Collection*, edited by Lester del Rey. I haven't seen a copy of the fourth anthology, edited by Harry Harrison. Of the three, Carr and Wollheim are very close, with Carr perhaps a shade better. The del Rey volume is outclassed. Only Wollheim picked an award winner this year, Fritz Leiber's charming "Catch That Zeppelin," which won both Nebula and Hugo awards. All three agree that "Child of All Ages" by P. J. Plauger is outstanding. Carr and Wollheim agree on "The Storms of Windhaven" by Lisa Tuttle and George R. R. Martin, and Wollheim and del Rey agree on "The Peddler's Apprentice" by Joan D. and Vernor Vinge. The Carr has most of my favorites: "The Silent Eyes of Time" by Budrys, "The New Atlantis" by Le Guin, "Sail the Tide of Mourning" by Lupoff, and two John Varley stories. The Wollheim has "The Custodians" by Richard Cowper, another favorite of mine. Despite the two story overlap, I recommend both the Carr and Wollheim volumes this year.

CURRENT SCIENCE FICTION HARDCOVERS

AUTHOR	TITLE	PUBLISHER	PRICE	ON SALE
Bishop, Michael	STOLEN FACES	Harper & Row	\$7.95	3/30

CURRENT SCIENCE FICTION PAPERBACKS

Ferman, Edward L.	THE BEST FROM FANTASY AND SCIENCE FICTION: A SPECIAL 25TH ANNIVERSARY ANTHOLOGY	Ace Books	1.95	3/1
Norton, Andre	KNAVE OF DREAMS	Ace Books	1.75	3/1
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ACROSS THE RIVER

by Gordon R. Dickson

Here, another episode from the world which was introduced in "Time Storm". The author, Mr. Dickson, is noted not only for his stories, but also for the many filk songs he's written and has sung at SF conventions. (Filk songs are like folk songs, except that they are written for fun by people who are still alive; it is an art form quite popular at gatherings of SF fans.)

The world was rocking gently underneath me. No . . . it was not the world, it was the raft rocking.

It had been some days. Just how many I did not know; but it had been more than a few. There had been moments of clarity before this. But they had been seldom. I looked around, identifying things from the hazy moments earlier. It was a beautiful clear day at sea, or at whatever equivalent of a sea it was on which we were afloat. A few inches from my nose were saplings, tree branches or what-have-you, that had been woven into a sort of cage about me. Beyond the cage, there was a little distance—perhaps ten feet—of open log surface to an edge of the raft, studded with the ever-sprouting twigs that tried to grow from the raft logs though these had been neatly and recently bitten off for this day. Beyond the logs was the restlessly heaving surface of the gray-blue water, stretching away to the curve of the horizon.

I rolled over and looked out in the opposite direction, through another cage-side of loosely woven withes at the rest of the raft.

It was about a hundred or so feet in length. At one end was a stand of—I had to call them 'trees' for want of any better name—their thick-leaved, almost furry-looking tops taking advantage of whatever breeze was blowing to push the raft along before it. Around their base grew the carefully cultivated stand of shoots from which my cage, and just about everything else the lizard-people seemed to make with their hands, had been constructed.

Behind the trees and the shoots were a couple of other cages holding the girl and Sunday, the crazy leopard, plus a pile of shells and stones that apparently had some value for our lizard-people captors. Sunday and the girl, thank God, looked all right.



They were both perhaps a little thinner; but they seemed lively enough; and, in fact, the girl was looking brighter and more in charge of herself than I could remember seeing her do in all the time I had known her. From her cage on back, along with piles of assorted rubble and junk—everything from sand itself to what looked like a heap of furs—were the various members of the crew. I found myself calling them a crew for lack of a better term. For all I knew, most of them may have been passengers. Or perhaps they were all members of one large family; there was no way of telling.

But in any case, there were thirty or forty of them, human-like, but green-skinned, with gill-slits in the neck and heavy lizard-like jaws and heads—looking exactly as they had when I had first seen them, on the shore of the inland sea stretching out over where Omaha had been . . . Omaha and my former wife, Swannee . . .

With that thought, it began to come back, how ever since the time storm had hit the world, I had been working southward, headed for Omaha, insanely sure somehow that, unlike all other places in the world, it was unharmed and Swannee had survived, after all. I had been dreaming that I would find her as she always had been but wanting me again, and we would settle down in an Omaha invulnerable to time storms or anything else.

Remembering that dream brought back all the rest of the memories, like a file of time-change-shocked zombies emerging one by one from a mistwall. My lonely childhood, Swannee leaving me, and my heart attack three months later—a heart attack at age 24! Then, the last two years during which I built myself to health, the sudden influx of the time storm, the mistwalls that marked moving lines of temporal change everywhere, and a different world wherever they passed, with the landscape moved either forward or backward in time. I remembered determining to go and find Swannee in Omaha, insanely certain that somehow Omaha had been spared by the mistwalls and she was still alive.

After that, the zombies came with a rush. My finding Sunday, the crazy leopard—crazy, because he was just coming out of the effect of being passed over by a mistwall and was back to being a kitten again, so that he attached himself to me the way a very small and young animal attaches itself to its mother. Then the two of us finding the girl who would not talk—and almost losing her again to the starving crazies. Then our pushing on until we came to the shore of this body of water that the raft beneath me now

sailed and which, I at last understood, covered the land where Omaha would have been if it had really survived. I remembered that ultimate understanding which came home to me at last, the final realization that Swannee was indeed gone—gone forever—and my own mental collapse.

That had been days ago. How long I did not know, but it had been some days. Then, slowly, that world had begun to wear thin; and more and more often there had been moments when I was not in my memories but here, seeing the raft and the rest of it from my present position. Now, there was no doubt which of the two worlds I actually lived in. This was my world, this time-storm-ruined world; and I, the crazy cat, and the girl would have to learn to live in it.

With that thought came that part of me which had never deserted me; the compulsion to keep pushing toward any goal I chose. I was here, I would survive. The crazy cat, the girl, and I—we would do well. It was time to take stock and make plans.

I was back for good. I could feel that now, along with a grim aching hunger in my belly. For the first time I began to wonder where the raft was going, and to worry about Sunday and the girl.

I looked around. The lizards were simply lying on their bellies or sides, absolutely still in the sunlight but with dark eyes open and heads up, not as if they were sleeping. The few on their feet were moving about aimlessly. There were only four who seemed to have any occupation. One was an individual who was working his way down the far side of the raft on all fours, delicately biting off the newly sprouted twigs from the logs of the raft as he went. Three other lizards at the rear of the raft were holding the heavy shaft of a great steering oar which evidently gave the raft what little directional purpose it could have, while floating before the wind.

In the very center of the raft, back about twenty feet from my cage, was a roughly square hole in the logs, exposing a sort of small interior swimming pool of the same water that was all around us. As I watched, one of the recumbent lizard-people got up, walked over to the pool and stepped into it. He splashed down out of sight and stayed invisible for what must have been at least four or five minutes before his head bobbed to the surface momentarily, and then he disappeared again.

There were several more splashes. A few of the others had joined him in the pool. I watched the water there for a while, but

the lizard-people stayed mainly below the surface. After about fifteen minutes or so, one of them climbed back out and lay down on the bare logs once more, scales wet and glistening in the sun.

From my earlier brief moments of sanity, I remembered seeing a lot of this swimming pool activity but without speculating about it. Now that my mind was back in my head for good, the old reflex in me—to gnaw away at answers I did not have—went to work. The most obvious reason for their continual plunges was to keep the outside of their bodies reasonably damp. They had the look of a water-living race; either one which had evolved in the sea, or whatever we were on, or humans who had returned to an aquatic environment. Either way, it could be that this part of the Earth had been moved very far into the past or future indeed; far enough back to find the great Nebraska sea, that shallow ocean that had occupied the interior of the North American continent in an earlier geologic period, or moved far enough into the future to find a time when that sea had been geologically recreated.

A shift that far forward would have given time for humans to devolve and make a genetic shift to the form of our captors.

I studied them.

I had not really looked closely at them before, but now that I did so, I could see clearly that there were, indeed, two sexes and that the females had a mammalian breast development—although this was barely perceptible.

The genitals of both sexes were all but hidden in a heavy horizontal fold of skin descending from the lower belly into the crotch; but from what I could see, these external organs were also mammalian, even human-like, in appearance. So it looked strongly as if the time storm had moved this area far futureward.

Outside of the slight bodily differences, the sex of the individual creatures around us seemed to make little difference in the ordinary conduct of their daily lives. I saw no signs of sexual response between individuals—no sign, even, of sexual awareness. Perhaps they had a season for such things and this was not it.

They were clearly used to spending a good share of their time in water; that perhaps explained their periodic dunkings in the raft pool. It could be that they were like dolphins who needed to be wetted down if they were out of water for any length of time.

It seemed strange to me, though, that they should go to the trouble of cutting a hole in the center of their raft, rather than just dunking themselves over one of the edges, if that was their reason for getting in the water. I was mulling over this strange-

ness when something I had been looking at suddenly registered as an entirely different object from what I had taken it to be.

Everybody has had the experience of looking right at an object and taking it for something entirely different from what it really is—until abruptly the mind clicks over and recognizes its true nature. I had been staring absently at a sort of vertical plane projecting from the water alongside the raft and perhaps half a dozen feet off from the edge. I had been more or less half-wondering what usefulness it had, when the object suddenly took on its true character and my heart gave an unusually heavy thump.

I had been allowing the plane's apparent lack of motion relative to the raft to deceive me into thinking it was a surface of wood, a part of the raft itself. Abruptly, I recognized what it really was—I had seen enough of the things when I was fishing on my vacations to South America, back when I still owned Snowman, Inc. What I was watching was a shark's fin, keeping pace with the raft. There was no mistaking that particular shape for the fin of a sailfish, a tarpon, or any other sea denizen. It was the dorsal of a shark—but what a shark!

If the fin was in proportion to the body beneath it, that body must be half as long as this raft.

Now that I saw it clearly for what it was, I could not imagine what had led me to mistake it for a plane of wood. But now my mind had clicked over and would not click back. If monsters like that were about in these waters, no wonder the lizard-people wanted to do their swimming inboard.

On the other hand, it was odd . . . once one or more of them were in the water, the shark should be able to get at them as easily underneath the raft as alongside it. Unless there was some reason it would not go under the raft after them. Or maybe the lizard people figured that by the time the shark started under the raft, they would have time to get back.

I looked about at the watery horizon. Judging by the sun, we were now headed generally east. With a continuous directional breeze like that to rely on, even the crude rig of this raft could follow a fairly regular route, depending only on the season of the year.

After an hour or so, the lizard-people let us out of our cages, without a word. In fact, from beginning to end I never heard one of them speak. That evening I recorded the angle of the setting sun on the horizon to the longitudinal axis of the raft, by cutting marks in one of the logs under my cage with my pocketknife. The

sun set almost due astern of us, but a little to the north. The next morning I marked the angle of the sunrise—again, a little to the north of our long axis. A check of the angle of the steering oar confirmed this. The three lizards holding it had it angled to guide the raft slightly to the north from a true east-west line. It was not until then that I thought of checking the stars.

So I did, as soon as they came out that evening, but what I saw was absolutely unfamiliar. I could not recognize a single constellation. Not that I knew much about astronomy, but like most people I was normally able to pick out the Little and the Big Dippers, and find the pole star. Such a difference in the patterns of the heavens I saw could only be strong evidence that a time change had moved this part of the world a long way from the present I had known—either far into the future or far into the past.

If so . . . A new thought kindled in an odd back corner of my mind.

Whether it was indeed a far past period, or a future one like it, through which this raft was now sailing, one thing was obvious. We were almost surely moving along roughly parallel to the northern shore of an inland sea, since the beach where we had first run into the lizards had to be that same northern shore and it now seemed probable we had been holding a steady northeasterly course ever since. I had seen a map of the Great Nebraska Sea once, in a geology textbook, years ago. It had showed the land area of the southern and middle States depressed, and that part of the continent drowned, so that the Gulf of Mexico, in effect, filled most of the lower middle region of North America. That meant almost certainly we should be running into land again before long. We were not, as I had originally feared, off on some endless voyage to nowhere, as we could easily have been, with an endless supply of food swimming underneath us and the water all around us drinkable though brackish.

The prospect of coming to land again before too long meant that we ought to get at least a chance to escape from the raft. I cheered up at the thought and, with immediate anxieties out of the way, remembered the rest of what was still heavy in my mind.

The insane belief I had had in the survival of Swannee was, of course, still with me after a fashion, like the mistwall of a time-change line in the back of my thought. But the rest of my brain recognized it for the illusion it was. Evidently, while I had been out of my head, what was left had been coming to terms with this

matter. I was now ready to admit that there might have been something more than a cold-headed decision to acquire a wife operating in me when I married her. The plain truth of the matter was that I had flipped over Swannee. But I had flipped *after* I married her, not before; and the thing that had driven her off was that I had tried to change the rules of the game after the game was started.

It was a hard thing to admit; but one of the things that had always stood me in good stead was the fact that, once I knew what it was I had to face, I had always been able to face anything. I had let myself go with the idea that I actually loved Swannee, and I had made up in my mind a completely figmentary image of her as someone who was lovable. Of course she wasn't. She was an ordinary self-seeking human being like all the rest of us.

Still, I had convinced myself she wasn't—so much so that when she acted like a perfectly ordinary human being and took off to escape my trying to make her into something she was not, I literally set out to work myself to death, and almost succeeded with the heart attack. I suppose my subconscious had some image of her hurrying back to my bedside when she heard how bad off I was, and then we would live happily together ever after.

But of course she did not come. And I recovered—in fact my doctors told me it had been a freak thing, my getting the attack in the first place, considering my youth and general good health; and I had been lucky as hell in coming out without any evidence of damage.

I suppose, in a way, I had never really let go of Swannee, even then, so that when the time storm hit, the one thing I could not accept was that it might have touched her in any way.

But now I had met, and survived, the fact of her death. The madness, of course, was still back there in the recesses of my mind and still virulent; but it was dying, and time would kill it off entirely, just as time had healed my first sense of loss when she had married again. Now that my madness was dying, locked in my wooden cage as I was most of the time and going nowhere, I had plenty of leisure to look more sanely at the world around me and to recognize a couple of points I had been refusing to see earlier. One was that we would have a job to survive on this raft. Sunday and the girl were already thin, I had noticed, and were getting thinner. Sunday himself required the equivalent of four pounds of meat a day to keep him alive. I needed nearly half that

amount, or about two thousand calories, and the girl, because she was not yet at her full growth, probably the same. We two, of course, could also make use of carbohydrates, like the bananas piled on the raft, as long as those lasted. But getting Sunday four pounds of meat daily, even by somehow fishing through the cracks between the logs of the raft, was impossible; even with both the girl and I doing our best—which we did as soon as I realized what the situation was. The lizard-people showed no interest at all in providing food for us. We would need to reach land soon if we wanted to live. And once on land, we would have to escape.

A second point I now came to realize was that relatively few people could have escaped the time changes, wide-spread as I now knew them to be. A few people and only a few animals. Apparently the changes had been like great rakes that swept away most of the population, but here and there let an individual—like me, the girl, or Sunday—slip through their tines. Either that, or some of us simply were natural survivors—statistical immunes.

Whether most of the population of my time had been carried off to some other continuum or destroyed by the suddenly changed conditions, there was no telling. But one fact was becoming more apparent day by day—there was no reasonable hope of their ever coming back. *The moving finger writes . . .*

I, and the girl, and Sunday, along with a handful of others, possibly including these lizard-people, were stuck with the world as it now was. What we had, of course, was chaos, with the time lines still moving and different times coming into existence behind each of them. But maybe, if I was right about some of us being statistical immunes, we would learn eventually to live with the lines, passing from zone to zone and becoming a new civilization which took constant time changes for granted.

The world was beginning to settle down around me once more. I began to think, not merely of how I might survive, but of what I might want, once survival had been assured. Certainly I would not want to go on living the way we had been, galloping across the landscape with a leopard and a half-grown girl, and both out of their right skulls, for company. Not that I would want to get rid of Sunday and the girl; but in my mind's-eye, I began to picture some kind of a settled life with a sane, adult female of my own age, with some security, some comfort.

More than that, I had started out in the world before the time storm to make my mark upon it. I would want to make my mark

upon this new world as well. I wanted not only a normal household and a normal family, but what you might call from my point of view normal authority, normal—well—normal position.

I would have to feel my way about the new rules the time storm had brought to the face of this planet, in order to figure out how all these things might be done. Unless, that is, there was some way of bringing the time changes to a halt . . .

Now, that was a new thought. It exploded in me silently, one night as I lay there on my back, looking up through the bars of my cage at the unfamiliar star-patterns, while the raft rocked gently under me. I lay there, turning it over and over in my head, examining it. That relentless part of my mind had fastened on the idea the second it emerged, like the jaws of a boa constrictor on part of a prey the snake intended to swallow; and now I knew I could never let it go, until I had halted the time storm, or proved it impossible to stop.

§ § §

Ten mornings later we saw land and, by noon, it was obvious we would reach it the same day. I was ready to blow kisses at it from the first second that it had appeared like a dark smudge on the horizon. Try as the girl and I might, we could not keep the three of us properly fed with the small under-raft waterlife, and I had lived with a sharp-toothed fear that we would grow too weak to try escaping by the time our chance for it came. Our goal was a curving bay with a wide beach shelving gently down to it. There were some hills hazy in the background, and one or two large rocks or small rocky islands just beyond the mouth of the bay.

Shortly after noon the lizards lined up along side of the raft facing the shark fin. There, they began to roll up some vegetable-like leaves I had seen piled on the raft and throw these small green balls at the shark. Where the balls of vegetable matter touched the water, a milky stain spread immediately, and was still spreading like the blossoming of some underwater flower as the motion of the raft left the spot behind us. As the lizards continued to pelt the water around the fin with the balls of green stuff, a milky rime gradually gathered around the base of the fin itself.

Suddenly the fin changed angle in the water and moved off rapidly until it was lost from sight. Looking back along the wake of the raft, I saw the shapes of small fish come to the surface belly-up through the whitened water where the green stuff had fallen.

So we half-drifted, half-steered at last into the bay without our overside companion. In the bay, the water was as calm as a lake on a still day, and startlingly clear. I could look down at a sandy, plant-and-shell-strewn bottom, finally. It must have been fifty feet deep, although it looked much shallower.

I was able to estimate its true depth because the full extent of the growth on the underside of the raft was now visible; and it stretched down almost, if not quite as far as the trees that were our "sail" stood up from the deck of the raft. A good two hundred yards or more from the beach, we grounded, the lowest extensions of the growth under our raft touching the bottom of the bay and stopping us from going further inshore.

The lizards immediately began diving for what seemed to be some sort of large shellfish. The shells were a good foot in length; when I picked up one of the first that was brought on board I was startled by the heaviness of it. The whole thing must have weighed twenty pounds.

In the sun and air, the shells soon opened of their own accord, and the lizards scooped the interior creatures out and swallowed them more or less whole.

So did the girl, Sunday, and myself. They were delicious, and we would have stuffed ourselves if I had not stopped and made the girl stop feeding herself as well as Sunday, for fear of intestinal upset in all of us after so long a period of semi-starvation.

But beyond a few mild stomach cramps an hour or so later, I had no bad effects; and the girl and Sunday did not even seem to have that. So, I left them to eat or not as they wished, and during the next few days we ate our persistent hunger out of existence by steadily snacking on the shellfish.

We were free to eat around the clock because Sunday, the girl, and I had been let out of our cages some time before we came to "anchor," and since then none of the lizards had bothered to put us back in. As my hunger diminished, I began to think less of food and more about escaping. I could stand on the edge of the raft and look at the sand of the beach. Only a couple of hundred yards away, as I said, but it might as well have been a couple of hundred miles away. There was no way to get ashore except to swim there. And even if the girl could and Sunday would make it through the water with me, any one of the amphibious lizard people could probably let us get nine-tenths of the way to the beach and still reach us in time to bring us back before we could wade ashore. They shot through the clear water like green rock-

ets. But there had to be a way. It was bad enough to have to figure out how to escape by myself. The headache would come in bringing the girl and Sunday safely with me. But I could not leave them behind. Neither one was able to survive on his own. It had to be the three of us, together.

I was standing looking down into the water at the lizard-people, even envying them in a way, when a swiftly-moving dark shadow suddenly intruded on the scene; and all at once lizards were leaping out of the water back onto the surface of the raft. All but one. Down in the transparent depths, that one was being swallowed. Either our original shark, or one just like it, had joined us; and once more we had a deadly companion alongside.

The lizards stood on the deck and stared down at the shark. I did not blame them. In the beautifully clear water, the huge sea predator loomed like a nuclear submarine. It was patrolling the water about the raft now, in short runs and turns back and forth, as if impatient for another victim.

I looked at the still-large pile of green leaves on the raft. But none of the lizards made a move toward it, and after a second I realized why. Clearly the stuff, in water, was a potent poison. They could safely throw it overside when they were moving before a breeze, away from the place where the poison would linger. But here in this bay, once the water was poisoned, they would not be able to return soon to their diving for shellfish.

I waited. The shark stayed. The lizards waited. I fumed. The shark's presence was one more obstacle in the way of escape for the girl, Sunday, and myself. At the same time, I was amazed at the apparent helplessness of the lizards. I had assumed without thinking that they would have some kind of plan to deal with a situation of this sort. But apparently not—unless their technique was to simply wait out the shark, sit on the raft until it got tired and went away.

However, if it was the same shark—or even of the same breed and temperament as the shark that had dogged the raft earlier—it was not likely to leave in any reasonable length of time. The fin that had followed us earlier had been with us for days on end.

The eerie part of the whole business was that there was no visible sign of an attempt at consultation among the lizards. From the beginning they had shown no indication of having a spoken language, and I had not been able to make out any other method of signs or signalling they might be using among themselves. But I had always assumed that in some way, if they had to, they could

communicate with each other. Now it seemed they could not even do that. A handful of them stood and watched the shark for a while, but eventually all of them went back to acting as if they were still out at sea, resting on the logs, hunting between them in the growth under the raft for small marine life to eat, and so on. The only sign that there was anything at all unusual about the situation was the fact that still none of them came to put us back in our cages.

Night came with no change. The day after that followed with the shark still waiting and the lizards still all on the raft. Around noon of the third day, however, something new began to happen.

Just before the sun was full overhead, one of the lizards lying near the edge of the raft beyond which the shark was presently patrolling, got to his feet. He stood facing down at the shark in the water, and then he began to bounce as he stood, not moving his feet but bending his knees slightly so that he bobbed up and down like someone on a diving board getting ready to dive.

Once started, he continued the bobbing steadily and with a sort of reflexive monotony of pace. The other lizards seemed to be paying no attention to him; but after perhaps half an hour, I noticed that another of the lizards, about ten feet from the first one, was now also on his feet and bobbing. The two of them matched their rhythms precisely, rising and falling together as if the same invisible spring were actuating from both.

An hour later, there were four of them on their feet and bobbing. Gradually, more and more joined them in silent, continuous movement—until by mid-afternoon all the lizards on the ship were performing the same soundless feet-in-place dance.

The shark, meanwhile, either having seen them on the edge of the raft, or—what is more likely—having been attracted by the vibrations of their movements through the logs and the water, was patrolling in very short runs back and forth, almost within touching distance, it seemed, of the raft edge.

Suddenly, as the shark passed, one of the lizard figures leaped into the water upon its back—and all at once the air was full of lizards taking to the water.

I ran to the side of the raft and looked out—and down. The shark was already at the bottom of the bay, moving rapidly away from the raft. But the lizards were all over him, like green-scaled dogs clinging to a bull. Their heavy jaws were tearing chunks out of the shark's incredibly tough hide, and a filmy cloud of blood was spreading through the underwater. Not merely shark's blood,

either. I saw the huge selachian catch a lizard in its jaws and literally divide him in half.

Then the whole struggle moved away out of my sight, headed toward the open sea, as the shark evidently followed its reflex to go for deeper water.

For some moments I simply stood, staring—then the implications of the situation exploded on me. I ran to the girl and grabbed her by the arm.

"Come on," I said. "Come on, now's our chance! We can get ashore now, while they're all gone."

She did not answer. She only stared at me. I looked over at Sunday.

"Come, Sunday!"

He came. The girl came also. She did not hang back but, on the other hand, she only let me pull her toward the shoreside of the raft, which was its forward end.

"We've got to swim for the beach!" I shouted at her. "If you can't swim, hang on to me. You understand?"

I roared the last two words at her as if she was deaf; but she only started back at me. She was not hindering, but neither was she helping. The cold thought came through me that once more I was being trapped by my concern for others. Why didn't I go off and leave her—her and the leopard both, if it came to that? The important thing was that I live, not that I save other people's lives.

But, you know, I could not. Somehow, to go ashore by myself and leave both of them was unthinkable. But she would have to do something more than just stand there without making any effort to get ashore. I tried to tell her this; but it was like talking to someone who was deaf and someone who had given up thinking.

I was reaching the desperation point. I was about to throw her bodily into the water when the first of the lizards started coming back aboard the raft and our chance to escape was past.

I gave up, and turned back to watch them climb out of the water onto the logs. Those who had been hurt were the first to return. They crawled back up into the sunlight, one by one, and dropped down, to lie as still as if each of them had been knocked on the head.

Lizards kept coming back for the next half hour or so. The last dozen or so to come aboard had been very badly bitten by the shark. Three of these later died and the surviving lizards simply pushed the bodies overside. The tide took them out in the late af-

ternoon, and in the morning they were gone. There would be plenty of scavengers waiting for them.

The lizards did not go immediately back to their shellfishing when day broke the following morning. They had evidently won their battle with the large shark—though my guess was that it had cost them at least a dozen of their number. But they seemed still exhausted by the effort; and as the sun rose, the clear water of the bay showed itself to be full of small sharks, not more than two or three feet long, all dashing around madly as if still excited by the gore and torn meat of the day before. Sunday, the girl, and I were still uncaged, and I began to hope that possibly this would become the permanent state of affairs. If so, I appreciated it; although of course, I could always have cut myself out of my woven cage with my pocketknife and then freed the girl and Sunday.

I could not decide what was keeping the smaller sharks around us. There was nothing for them to feed on that I could see. Then that night, the first storm I had ever known to ruffle this sea blew up, a heavy, tropical, rainstorm type of atmospheric explosion; and I found out why they were still with us.

The wind began in the afternoon, and the sky piled up with white clouds which crowded together and darkened until we had an early twilight. Then the breeze died and the water beneath us became viscid and heavy. The raft rocked, rubbing on the floor of the bay with its undergrowth, swayed by a swell that came in on us from far out on the airless water, even though we felt no wind where we were.

Then lightning and thunder began to flicker and growl—high up in the clouds above us, but also far out, over the open water. A new, cold breeze sprang up, blowing shoreward, strengthening as the daylight faded; and the sound and activity of the storm grew, approaching us and coming lower, closer toward the surface of the sea. As the last of the sun's illumination went, leaving us in pitch darkness, the storm broke over us with its full power; and we clung in darkness to the now heavily pitching and rolling raft.

I found a place to wedge myself among the trees of our "sail", with one arm around the girl and the other holding on to Sunday. The girl trembled and shivered as the cold rainwater poured down on us, but the leopard took it stoically, pressing close to me but never moving. Around us, also wedged in among the trees, were some of the lizards. Where the rest of them were, I had no idea. In the total darkness, it was impossible to see someone unless they were right beside you. Vision came only in brief glimpses, every

few seconds or so, when there would be a crack of thunder and a vivid lightning flash that lit up the whole surface of the raft, which was streaming with the rain and plunging like a tethered horse as the black waves all around us tried to drive us up on the beach while the raft's undergrowth, grounded on the sand below, resisted.

The lightning flashes were like explosions in the mind. After the sudden brilliance of each was gone, the scene it revealed would linger for a second on the retina and in the mind before fading out. I got wild glimpses of the struggling raft—and wilder glimpses of the waters of the bay, not merely their surface but their depths, as sometimes the raft heeled over to hold us in a position staring almost directly down into the heaving sea.

The water was alive with marine life of all kinds, visible in the lightning flashes, dashing about in a frenzy. I had wondered what had brought all the small sharks into the bay after the fight with the big shark was over. Now I suddenly saw. Like a great waterlogged mass, bumping and rolling along the very floor of the bay, impelled by the storm and by the fly-like swarm of smaller fish tearing at its carcass, the huge shark, now dead, was with us again.

It could not have died at the time the lizards abandoned their fight with it, or its skeleton would have been stripped clean long before this. It must have survived, weakly fighting off the smaller members of its own species who were ready to devour it while it still lived, until just a few hours ago, when loss of blood and strength had finally let it down into full death.

Now, like a dead man returned to the scene of the crime, it was back with us, courtesy of the storm and the onshore wind. A freak of that wind and storm was bringing it back not merely into the bay but right up against the roots of our raft itself. Clinging to the tree-trunks on either side of me, looking down into the water with each flash of lightning, I was less than fifty feet or so in a straight line from where the carcass was being torn apart—now by larger sharks and other fish up to fifteen or twenty feet long, still small compared to the sea corpse, but big enough from my point of view. I fretted over their presence. Even if another chance to escape should come, with all the lizards off the raft, we could not hope to swim safely through those swarming sharks.

Then, suddenly, there was a lightning flash and the underwater scavengers were all gone. The half-eaten body of the large shark lay rolling from the sea-disturbance and the tearing it had just

been getting by its devourers, but now it was alone on the floor of the bay. I blinked and waited for the next flash. I could not believe what I saw.

With the next flash came enlightenment; and with it, an end to shark carcass, raft, lizards, and everything. The next glare showed the shark overshadowed by a shape twice its size—a dark body, like an underwater cloud. And it also showed, out of the water and white against the black of the waves, a gray-white tentacle as thick as a cable used to tie up a superliner. The tentacle was out of the water. It stood erect in the air like a telephone pole, twenty feet above the deck at the far end of the raft. A moment later, the raft shuddered as if under the blow of an unthinkable huge axe, and the end where we were began to rise in the air.

Another flash of lightning showed the great tentacle now gripping the whole far end of the raft and pulling it over, down into the waves.

There was no more time for waiting, nor any time to talk the two of them into coming with me. I yelled in Sunday's ear to come, pulled the girl after me, and jumped for the water. Its choking wetness closed over my head; but I came up, still holding on to the girl, and taking a sight on the beach with the next flash, began to swim ashore.

I do not remember how I made it. It seemed I swam forever, holding up the girl. But eventually the wet blackness that enclosed us threw us forward into a blackness that had no substance and a split second later we slammed against hard, level sand. Even with most of the breath knocked out of me, I had the sense to crawl as much farther up the beach as I could, dragging the girl. Then I collapsed. I let myself drop on the beach, one hand still holding the girl's arm. The damp, grainy surface beneath me went soft as a mattress and I fell into sudden, deep sleep.

I woke to daylight and warming air. The girl was only a few feet away. So was Sunday.

In the bay there was no sign of any raft, or anything else for that matter. We were as alone as if we had been lost in the desert for weeks. I lay there, slowly letting our new situation become real to me.

We were free again, but without food, weapons, or transportation. In addition, I felt as if I had been drawn through a whole series of knotholes, one after another. By contrast, the girl and Sunday looked as rested and cheerful as if the storm and all the

rest of it had never happened. Well, their reactions were nothing to be surprised at, I told myself, grumpily. I was twice the age of the girl or nearly so, and probably five times the age of Sunday. It didn't matter. By God, the three of us had made it!

The minute I tried to sit up, they noticed me. In a second they were all over me. Sunday gave one large leap to land beside me and started to rub himself up against my chest, knocking me flat. The girl reached me a split-second later and picked me up.

"Stop that," she scolded Sunday, out loud, in actual and unexpected words. I was sitting up again now, but her arms were still around me, her head against my chest, and I got the strange impression that she was hugging me. This sort of response by the two of them made me feel absurdly warm inside; but when I tried to pat the girl on the head, she broke away at once, scrambling to her feet, turning her back and walking off a few steps. Sunday, purring loudly, was doing his best to knock me down again; but I was braced for him.

I leaned heavily on his back with one arm and pulled myself creakily to my feet. Seen from the shore, the place we had ended up looked much less like California than the beach where we had first run into the lizards. Back from the stretch of open sand



were some kind of pine-needle trees with a northerly look, and a tree like a willow with fairly thick-standing grass in the open spaces.

I patted Sunday on the head and spoke to the girl's back.

"We'd better look around," I said, hoarsely.

I led the way and the other two followed. Behind the immediate fringe of trees there was a small bluff. We went up to the top and looked out at a stretch of what seemed to be midcontinental prairie spottily overgrown with clumps of trees. There were not quite enough trees to call it a forest and an almost total lack of undergrowth. In the open patches it was mainly high grass, green and brown, with just an occasional, lone sapling or bush.

Nowhere in sight was there any sign of civilization.

I stood on the top of the bluff and did some pondering. I did not like the semi-arid look of the country before me. We were on foot now; and we could survive without food for a few days, if necessary. But what I was looking at did not have the appearance of either lake or river country, and drinking water was a constant need. Add to that the fact that we were now completely unarmed except for my pocketknife, and it might not be just wild animals we would have to worry about encountering out there.

In the end, I decided against leaving the only drinking water in view, which was the lake. We went east along the beach, the direction in which the lizard raft had been headed, for three days, living off shellfish and whatever small creatures we could find in the sand or shallow water just offshore as we traveled. Our diet of small things from the underside of the raft had done my sense of taste a world of good. I could now eat anything that didn't look as if it would poison me—and eat it raw at that. The girl was equally open-minded, I noticed; and as for Sunday, he had never had a problem about the looks of his food to begin with.

The third day we hit the jackpot—well, a jackpot of sorts. It must have been somebody's lakeshore home on a lake that had now become part of the inland sea.

The next morning we rode out on two bikes, the girl and I—she had evidently ridden a bicycle before, and the skill came back to her quickly—wearing backpacks. We started off down the empty road, away from the lake, with Sunday footing it alongside us.

The weather was pleasant, with the temperature in the high sixties, Fahrenheit; and the sky was lightly spotted with clouds. As we got away from the water the humidity fell off sharply, until the day was almost like one in early autumn up near the Cana-

dian border. We made good time, considering—considering Sunday, that was. Dogs are generally content to trot steadily alongside the bikers they belong to, but Sunday had a cat's dislike of regimentation. Sunday preferred that the girl and I travel at the equivalent of a slow walk, so that he could make short side excursions or even take a quick nap and still catch up with us. When we did stop finally, to give him a break, he lay down heavily on top of the girl's bike and would not be moved until I hauled him clear by sheer strength of muscle and a good grip on the scruff of his neck.

In the end we compromised with him, riding along at hardly more than walking speed. As a result, not surprisingly, I got more and more involved in my own thoughts.

The road we were on had yet to lead past any other sign of civilization. But, of course, we were not covering ground at any great speed. Eventually, our route must bring us to some place where we could get the weapons and wheels I wanted. Then, once more mobile and protected, as it were, I meant to do a little investigating along a thought I had come to, lying on the lizard raft, nights. If the world was as full of potential threats as we had just seen, it was high time we set actively about the business of learning the best ways to survive in it . . .

We hit no signs of civilization that day, but late in the afternoon we crossed a creek hardly larger than a trickle, running through a culvert under the road. In this open territory, it looked as though it probably contained clean water; but I boiled it to make sure; and we set up camp for the night beside it.

Midway through the next morning on the road, we found a chunk of suburb. I mean exactly that—a chunk. It was some two hundred yards off our asphalt highway, a roughly triangular piece of real estate—with lawns, garages, street, and tract houses—looking as if it had been sliced off at random and dropped down here in the middle of nowhere.

There were no people about, any more than there had been people about the lakeshore home. But these buildings were not in the untouched condition of the house by the lake. The area looked, in fact, as if a tornado had passed through it, a tornado or else something with the size of a dinosaur and a destructive urge to match. There was not one building that was whole and weathertight, and some were all but flattened to the ground.

Nonetheless, they represented a treasure trove for us. I went through all the houses and turned up a sixteen gauge shotgun

and a carbine-type .22 rifle. There were no shells for the shotgun and only one box of shorts for the .22. But the odds on picking up ammunition for these two common calibers of firearms were good enough to count on.

The suburb-chunk also contained eight cars. Five of these had been made useless by whatever had smashed the buildings. Of the remaining three, all were more than a few years old and one would not start at all. That left me with a choice between a two-door Pontiac hardtop in relatively good shape and a Volvo four-door sedan that was pretty well beaten up.

I chose the Volvo, not only for its extra carrying capacity, but because the gas mileage should be better. There was no filling station among the homes in the suburb, but I drained the gas tanks of all the other cars that proved to have anything in them; and when we started out in the Volvo, we had a full tank plus another fifteen gallons in cans tied onto a makeshift rack on top of the trunk.

The suburb had a fine, four-lane concrete road leading out of it, but that ended about two hundred yards from the last of the smashed houses. I drove the Volvo, bumping and bucking, across a lumpy open field to get it back on our familiar asphalt, and turned left into the direction we had been originally headed. We kept going, and about an hour later I spotted what was either a stationary mistwall that bent abruptly away from us, or two stationary mistwalls which had come together at their ends to form an angle. It was something I had not seen before, and we approached the phenomenon cautiously. The nearer wall was to the right of our original line of travel; but it angled toward the road we were on, crossing the asphalt a hundred yards or so up ahead of us, to meet and form the angle with the other wall only about fifty yards farther on, to the left of the road. It was not moving, and—cautiously—I drove up to within about ten yards of it before I stopped the Volvo.

I got out and looked at the wall. I also walked out to my left and looked forward along the retreating angle of the second or continued mistwall to see where the road emerged once more from it, only about a couple of hundred yards farther on. It occurred to me that all I had to do was make a small detour around that angle and keep going. That way the three of us would continue to stay safe, united, and happy. Or, I could turn and go through the mistwall; and I might, just might, learn something—that is, if I made it through all right.

I stood there. And the longer I stood, the stronger grew the desire in me to try going through the wall. It was exactly the way it had always been, from my earliest childhood, when my mind fastened on to a question and would not let it go without finding the answer. The phenomenon was like every other time I'd let that relentless mental machinery in my head get its teeth into a problem. I remembered perfectly the terrible feeling I had felt during the initial seconds of that first time change when I had thought I was having another heart attack. I remembered the miserable, helpless, empty sensation all through me after I had come to. I remembered every bit and part that had been bad about it; and still—still—as I stood there, the wanting to go through that wall and find out what I did not know was like a sharp, sweet taste on my lips, like a hunger that used me up inside.

I turned back at last to look at the girl and Sunday. If I went through the wall and never returned, what would happen to them? I told myself that I owed them nothing, and something inside me called me a liar. At the same time, the thought of any responsibility I might have toward either of them had about as much deterrent effect on the hunger that was eating me up as a cup of water tossed on a burning building. I had no real choice. I had to go through that wall even if I—and they—died for it. I turned back the the leopard and the girl, both of whom were still sitting in the car.

"Stay here!" I said. "You understand me? Stay right here. Don't take as much as one step after me. *Stay where you are!*"

They both stared at me silently. One of the girl's hands twitched—that was all. I turned and walked away from them, toward the mistwall, until I had to squint my eyes against the flying dust of it. Just before I reached the actual mist of the wall, I turned and looked back. The girl still sat with Sunday beside her, both watching me. Neither had moved a muscle. I turned back again, closed my eyes to the sting of the dust, and walked blindly forward.

But the hard part was not the dust. The hard part was that it was like walking into an emotional tornado. It was bad. It was very bad. But, somehow, it was not as bad as I remembered it from the first time, outside my cabin. Maybe this was because my first time through had left me with a sort of immunity, as if I had been inoculated against the effects I felt. Maybe it was easier because I now had some idea what to expect and was braced for it. Basically, I felt as if my soul had been ripped out of my being. I

felt naked, sick and frightened. But, you know, it was not the kind of fear I feared—if that statement makes any sense to you. I stayed on my feet and came out the other side, walking.

I was suddenly assaulted by the clamor of dogs barking not far in front of me. I opened my eyes and saw them—more than a dozen of them, all tied to short leashes, all barking, snarling, and leaping against their tethers to get at me. Their leashes were anchored to thick stakes driven into the earth, in front of a slice of house about fifty yards away, a house sitting on a chunk of lawn in the interior angle of the two mistwalls. Behind the house was forest.

The house itself was a two-story frame building that looked as if it would be at home surrounded by a midwestern farmyard. As I looked, the door opened and a woman came out with a rifle already at her shoulder, pointed at me.

"Drop your gun." Her voice was a low, carrying soprano, soft but positive.

"Wait a minute," I told her. "How about talking about this?"

I had no intention of dropping my gun. She was standing behind the dogs, in the open, with no rest or other support for her rifle, but with the weapon up and aimed. If I had to shoot her to live myself, I would. At that distance, unless she was a natural markswoman, holding her gun steady enough to hit me would not be easy.

Even from where I stood, I could see the end of the barrel waver slightly in the sunlight.

I was more concerned about her dogs, and I was not about to drop the one weapon that could defend me against them. In fact—the situation framed itself in my mind and produced its own inescapable conclusion—if she turned the dogs loose on me, I was going to shoot her first. They were dogs of all sizes, but the least of them must have weighed at least forty pounds, heavy enough to be a potential man-killer. I could shoot three-quarters of them and there would still be enough left to pull me down and finish me off. Nor did I think she would be able to pull them off in time to save my life, once she had set them on me.

"Listen!" I called to her. "I'm just here by accident—"

"I said put down your gun!" she cried.

Her rifle went off and a bullet whistled wide of me into the mist-wall beside me.

"Quit that!" I said, raising the .22. "Or I'll have to start shooting back."

She hesitated—at least she did not pull her trigger again. Perhaps the first shot had been more accidental than otherwise. I kept talking.

"Look," I told her over the noise of the dogs. "I don't want to bother you. I just happened to stumble on your place here, and I'll be glad to be on my way again. Why would I want to be any trouble to you anyway? You're armed, you've got your dogs, and I'm all alone. Now, why don't we just both point our rifles to the ground, and talk for a moment—"

Her gaze, which had been focused on me, shifted suddenly. Her rifle barrel changed its aim slightly.

"Alone?" she shouted back. "Do you call that alone?"

I turned to look; and sure enough, her question was a good one. If there was one thing I could count on—if there was one damn thing under the sun that I could absolutely be sure of with Sunday and the girl—it was that they would do exactly what I had told them not to. Somehow they had worked up the courage to come through the mistwall on their own, and now they were standing right behind me.

Of course, this changed the situation entirely. The woman had three times as much target, now. She might not hit me, but her chance of hitting one of our group was tripled. I felt a touch of something not far from panic. With Sunday in view and scent, the dogs were now really going crazy while Sunday's own back was beginning to arch like the stave of a drawn bow. He did not like those dogs.

But for all that, he would not leave me to face them alone. He pressed close against my leg and snarled softly in his throat, watching the dogs. It was magnificently touching and at the same time monumentally exasperating to know that the crazy cat would stay beside me, even if I tried to drive him back with a club.

I looked again at the woman—just in time. She had grown arm-tired of holding the rifle to her shoulder and was moving now to untie the nearest dogs.

There was no time for me to debate the ethics of the situation. I put a shot from my own rifle into the dirt between her and the animal she was approaching.

She froze.

"Don't try letting any of them go!" I called to her. "I don't want to hurt you, but I'm not going to let us be chewed up by your animals. Step back now and put your own gun down."

She backed up, but without letting go of her rifle.

I put another shot from the .22 into the frame of the doorway behind her.

She checked, hesitated, and let the gun slip from her hands to the earth at her feet.

"All right!" I said. "Now, I'm not going to hurt you, but I've got to make sure you're not going to hurt us. Stay where you are and don't move."

She stood still. I turned to the girl.

"Hold Sunday!" I said. "Stay right where you are, both of you. This time, I mean it!"

I went forward, holding the .22. The dogs had their tethers stretched taut, trying to reach me, so that it was possible for me to see where I needed to walk to stay out of reach of each one of them as I went through their pack. I came up to the woman, bent, and picked up her gun. It was a 30-.06, a good, clean, hunting rifle.

I knew what I had to do, then—and that was shoot the dogs while they were all still safely tied up. But when I raised her rifle, I found I could not do it. It was not just that the woman would be vulnerable without them, once I had taken her rifle and gone on. It was also that I was still too civilized.

I could not get over thinking of them as pets, instead of as the four-legged killers she had turned them into. I twisted toward the woman.

"Look," I said. "I'm going to have to kill your dogs to make sure they won't hurt us, unless you can think of some way to fix things so I can trust them not to attack us."

She sighed and shivered at the same time. It was as if all the strength in her had suddenly run out.

"I can do it," she said, in a dead voice. She looked away from me, to the dogs. "Quiet! Down—all of you. *Down!* Be quiet!"

They obeyed, to my astonishment. Their barking and snarling fell gradually into silence. They stared at the woman, licking their muzzles, and lay down one by one until they were all on the ground and silent, watching.

"That's pretty good," I said to the woman.

"I used to run an obedience school," she answered in the same dead voice. "You don't have to worry. You can go now."

"Sorry," I said. "But I don't know what else you have in the way of guns or dogs inside that house of yours. Let's go inside. You first."

She stiffened.

"No!"

"Calm down, damn it!" I said. "I just want to look around."

She was still stiff.

"Just a minute," she said. She turned her head and called back through the open doorway into the dark interior behind her.

"Wendy, come out here."

She looked back at me.

"My daughter," she said, harshly.

We waited, and after a second, a blond-haired little girl of early grade school age came out and pressed herself up against the woman, who put her arm around the child.

"It's all right," the woman said, "We're just going to show this man our house."

She turned then, and with one arm still around her daughter, led the way inside. I followed, carrying both rifles. There was not a great deal to see inside. A time change line had cut the house very nearly in half. A portion of the livingroom, all of the kitchen and bathroom, plus one bedroom and a half, remained. The bright sun coming in the uncurtained windows of the rooms that were still whole made very clear and plain the spartan existence that the two of them had been living here. I went over the rooms carefully, but there were no other guns, only some kitchen knives that might have possibilities as weapons.

The women said nothing all the time I was looking around. She stood by the livingroom window and glanced out from time to time. I thought she was checking on the dogs, because they stayed quiet. But I was wrong.

"Is that your wife out there?" she asked at last.

"Wife?" I said.

For a second, the question made no sense at all. I looked out the window where she was looking and saw only Sunday and the girl. Then, of course, I understood.

"No!" I said. "She's just a kid. I picked her up after she'd just been through a time-change; and it mixed her up pretty badly. She's not right yet, for that matter. I—"

I broke off. I had been about to go on and tell her about my previous conviction that Swannee had escaped the time changes, and a lot more that was purely personal. But it was none of her business. For that matter, the girl was none of her business, either. The fact was, I had long since drifted into ignoring any sexuality in the girl if I had ever paid any attention to that, in

the first place. My mind had been full of my own personal problems. But I could hardly try to explain that to this woman without confusing the matter more that I would clear it up. I was a little surprised at the strength of the sudden urge in me to talk about it; then I realized that she was the first rational, adult human I had met since the beginning of the time storms. But it was still none of her business.

I looked once more around the livingroom of the house, ready to leave now. The woman spoke quickly, as if she could read my mind.

"Why don't you ask her to come in?"

"Ask her in?" I said. "If she comes in, the leopard has to come in, too."

She grew a little pale at that and held the young child closer to her side. But then she tossed her head back.

"Is he dangerous?" she asked. "The leopard?"

"Not if the two of you stay well back from him," I said. "But if he comes in here, he's got to pass by those dogs of yours, and I can't imagine that happening."

"I can," she said, flatly, "They'll obey orders."

She walked with her daughter to the open door and through it. I followed her.

"Come on in!" she called to the girl and Sunday. Of course the girl neither moved nor answered, any more than Sunday did.

"It's all right," I told the girl. "You and Sunday come in." I turned to the woman. "And you'd better control those dogs."

The girl had already started toward the house; but Sunday held back. Seeing he would not come, she turned back to him. I had to go out to both of them.

"Come on," I said. I took a fistful of the loose skin at the scruff of Sunday's neck and led him with me toward the house. He came, a little reluctantly, but he came. The dogs tied nearest to his path shrank back from him as we approached, but those farther off whined and crawled forward to the limit of their tethers, white-toothed and panting.

"Down!" said the woman from the doorstep; and, hearing her, if I'd been a dog, I would have done what she said instantly. The soft soprano now had a knife-edge to it. It lifted and cut. It carried clearly without her seeming to have to raise the volume. "All of you—down! *Quiet!*" The dogs followed the girl and Sunday with eyes and wet breath, but they neither got to their feet nor raised a clamor.

We all went back inside the house and the woman shut the door behind us. One lone bark sounded from the yard as the door closed. The woman opened it again and looked out. There was silence. She closed the door once more and this time the silence continued.

"Hello," she said to the girl. "I'm Marie Walcott, and this is my daughter, Wendy."

The girl—my girl—said nothing. Her face had an expression that made it seem as if she just did not understand, but I knew well enough that it was a sign of stubbornness.

"She doesn't talk," I told the woman. "I mean, she can talk, but she doesn't like to—part of the shock she went through, I suppose. But she hears and understands you, all right."

The girl stepped to my side, then went around me and knelt down on the other side of Sunday, putting an arm around the leopard's neck.

"Poor thing," said the woman, watching her. The expression on the girl's face did not change. The woman looked back at me. "What are you going to do now?"

"We'll move on," I said. "I told you that. And I'm taking this rifle of yours. I'll leave you my .22 rifle—I'll drop it about five hundred yards out, so we'll be well gone by the time you get to it. It's a lighter gun and it'll suit you better in any use you've got for a rifle. The dogs are your real protection; and I'm leaving you those, alive. But try to track us down with them and I'll shoot every one of them that Sunday doesn't tear up."

"I wouldn't come after you that way," said the woman. "Where are you going, anyway?"

"Into the futuremost segment of the time-changed country I can find," I said. "Somewhere there must be somebody who'll understand what's happened to the world."

"What makes you so sure there's anyone like that?"

"All right," I said, "if there isn't, we're still going to be looking—for the best piece of time to stay in or some way of living with the time changes themselves. I've been running away from the mistwalls; but now I'm going through any one I meet, so I can find out what's on the other side."

She looked out her window toward the two mistwalls overshadowing her dogs and her home.

"What is on the other side out there?" She asked.

"You wouldn't like it," I said. "What's farther in?" I pointed through the back of the house toward the forest that crowded

close upon her place.

"I don't know," she said. "There used to be a town of fifty thousand people—Gregory, Illinois—about ten miles down the road, there. But there's not even any road, now. I don't know."

I looked closely at her.

"You haven't moved from this place since the time storms first started?"

"That's right." She looked somber. "Wendy and I sat here and prayed, after the first time change came close. At first we prayed for Tim—for my husband—to come back. But now for some time we've just prayed that the mistwalls will leave us alone."

"Two of them are right on top of you," I said. "Didn't you think of getting away from them?"

"To what?" she said, shrugging. "I've got half a year's supply of food in the basement here—had to, since we live so far out of town. If they move over us, then it's over, all at once. Meanwhile, we're safer here than someplace else. I ran a boarding kennel, so I had the dogs here to guard me. And there was—or we thought there was—always the chance my husband . . ."

She shrugged again and stopped talking.

"All right," I hefted both rifles and turned toward the door. "Come on, Sunday, girl. As for you, Mrs. Walcott, wait fifteen minutes and then follow us out. You'll find the .22 leaning against a tree, a little ways into the woods, there."

I opened the door. The woman's voice spoke from behind me to the dogs, commandingly.

"Quiet! Down!" Then her tone changed. "We could go with you."

I turned around. My first, unthinking reaction was that she was joking. I saw she was not. Then, suddenly, I saw and understood a great many other things.

I had been assuming, without really looking at her, that she was housewifely middle-aged. She was wearing slacks and a man's shirt, and of course she wore no makeup. Her hair was cut short—rather clumsily cut short—and there were dark circles of weariness under her eyes. By contrast with the girl, the only human member of the opposite sex I had seen since the first time storm, at first Marie Walcott had looked maturely-fleshed and unremarkable. Now, I suddenly realized that she was probably no older than I. In fact, in civilization once more, she would have been damned attractive. She was full grown, someone my own age, with the body of a woman rather than that of a half-grown girl and with a sane adult mind and capability of speech. Sud-

denly I remembered that it had been a long time since I and any woman . . .

I noticed all this in a moment, and in that same moment I realized that she had wanted me to notice—had set out to make me notice. It changed the whole picture.

"Go with us?" I said; more to myself than to her.

"We'd all be safer, in one large group," she said. "You could use another grown-up. And of course, there are the dogs."

She was right about the dogs. A pack like that, properly trained, could really be valuable.

"There's your daughter," I said. "She's too young to be making long marches every day."

"I've got a cart the dogs can pull her in. Also, we'd be running into roads and some kind of transportation sooner or later, don't you think? Meanwhile, I—we'd both feel better with a man around."

She was giving me all the practical reasons why our teaming up would work; I was countering with all the practical arguments against it; and we both knew that we were talking around the one real reason I should or should not add her to my party, which was that I was male and she was female.

"Why don't you think it over?" she said. "Stay here overnight and think about it. Maybe we can talk about it some more, later on."

"All right," I said. "We'll stay until tomorrow." I glanced out the window.

"I'd better camp off by the edge of the trees, there," I said. "Sunday isn't going to take to your dogs just like that—or they to him."

"Sunday?" said the woman. "Is that what you call him? I think you heard me say my name. I'm Marie Walcott and this is Wendy."

"I'm Marc Despard," I said.

"Marc, I'm pleased to meet you." She held out her hand and I took it. It was a strange feeling to shake hands after the last few weeks. Her hand was small but firm, and there were calluses at the base of her fingers. "Are you French?"

I laughed. "The name's French-Canadian."

She let go of my hand, and looked at the girl.

"I didn't hear . . ."

"She's never told me her name," I said. I looked at the girl. "How about it? Do you want to tell us now?"

The girl was absolutely silent. I shrugged.

"I've just been calling her 'Girl,'" I said. "I guess you'll have to do the same."

"Maybe," Marie smiled at her, "she'll tell us her name—later on, when she feels like it."

The girl stood without a word.

"Don't count on it," I said to Marie.

I had rigged a backpack-style tent for the girl and myself from some of the canvas we had found in the deserted chunk of suburb. I set this up at the edge of the trees, upwind of the dogs. Sunday had already begun ignoring the dog pack; and Marie rode herd on them through the afternoon, commanding them to be quiet any time they started to get worked up about Sunday or the rest of us. Once the camp was made, the girl tied Sunday up so that she could wander off by herself. Since he was not objecting and it was convenient to have him anchored, I left him that way.

The girl had not returned by the time Marie stuck her head out her door to call us to dinner. I waited a little while, but she still had not come back when Marie called a second time, and I decided not to worry about her. There was no counting on her, anyway. Sunday was still not objecting to being tied up—which was ideal from my point of view. He had dozed off, lying on his back with his paws in the air, kittenishly, as if there were no dog within a thousand miles of him. I got up and left; all he did was open his eyes sleepily to watch me go.

The good smell of cooking reached me before I opened the door and surrounded me as soon as I came in. Marie had heated and glazed a ham—it had to have been a canned one—and filled out the meal with home-grown tomatoes, potatoes, and a salad made with some greens I didn't identify but which, with a cheese dressing, tasted magnificent.

"She didn't come with?" Marie asked, as she sat down at the table.

"She's gone off somewhere."

Marie nodded.

It was a marvelous dinner. Marie had gotten rid of the slacks and shirt. She was wearing a soft, yellow dress that went well with the color of her blonde hair, which—while still short—was smoothed out somehow and looked less as if it had undergone home barbering. She had used a touch of lipstick too, and possibly a hint of other makeup.

After Wendy had gone off to bed, Marie came up with a bottle

of rum; it was not great rum, but it went well with the coffee. We sat on the couch in her living room and talked about our situations—and a lot else. I remember telling her—under the influence of the rum—more about myself than I had intended to ever tell anyone.

I don't know how late it was, certainly sometime after midnight, when I left the house. Marie followed me to the door in the darkness. She put her head out and hissed the dogs into silence when they roused on seeing me. I gave her a last kiss and went across the dark ground under a young moon to the camp.

Sunday was curled up under the tree to which he had been tied; and there was a lump on the ground beside him that was the girl, come back. The groundsheet out of our tent was a black pool under them on the semi-moonlit ground; some of our blankets were spread over both of them. I shrugged, drunkenly. If the girl wanted to lie out there and get soaked through with the morning dew, that was up to her. I crawled into the tent and wrapped myself as well as I could in the remaining blankets.

I woke; someone was standing over me. It was Marie. She handed me a cup of hot coffee.

"Sorry to wake you," she said. "But I can use your help if we're going to get off today."

"Get off today?" I echoed stupidly. She stood there, looking down at me for a long second.

"That's what we talked about last night, wasn't it?" she said. "Do you remember?"

I started to say I didn't. But then it came back to me. She was right, of course. That was indeed one of the things we had talked about last night. We had made plans to leave today, all of us, together.

"Yes," I said. I lay looking at her, part of me hating myself and filled with self-contempt at letting myself be bought so easily; and part of me remembering last night and looking forward to tonight. "I'll be along in a bit."

"Good," she said.

She went off. I got up and dressed. The girl and Sunday were not to be seen.

Normally, I liked shaving. It was part of the familiar ritual of coming awake in the morning—and I do not wake up easily. But this morning the habitual scraping actions did not clean off the layer of guilt left on me by the night before.

In a sense, I had sold Sunday and the girl down the river for

the selfish satisfaction of my own desires.

Sunday, of course, did not know what was going on. But whether he knew it or not, he was not going to have the old freedom he was accustomed to. Also, he was going to have to share me with a couple of extra humans—and that was not going to make him happy, either. He had adjusted to the girl, but the girl loved him. Marie and Wendy did not, and there was no guarantee that they ever would. As for the girl, she had already made it plain how she felt about the situation.

Well, I had thought earlier about building a fuller life for myself. I had simply assumed that the girl and Sunday would be part of it, and I had not expected such a reaction from the girl. I washed the last of the soap off my face and began to pump myself up with counter-arguments. We had been bound eventually to bump into other people with whom we would want and need to associate. Sunday would have to share me with other people, in any case. The girl, likewise. The three of us could not go on forever being exclusively insane together, as we had been until I had faced the fresh-water sea and the fact that Swannee was gone for good.

Besides, the girl did not own me—nor did Sunday. I had a right to lead my own life. After all, I told myself, it was not going to be easy for me to adapt, either. But I was going to have to do it. So were the other two. That was life—you could not always have what you wanted.

By the time I went over to get some breakfast from Marie and help her prepare to move out, I had the top layer of my mind, if nothing beyond that, thoroughly convinced that I was not only doing the best thing for all concerned, but being considerably self-sacrificing to boot.

It took us all morning to get ready. Marie had two carts fitted with bicycle wheels, which she had trained some of her dogs to pull. The carts themselves were obviously homemade, but remarkably well put together. Marie, apparently, had a definite mechanical talent. They were light and rolled easily. But they had one real drawback—no springs except the bicycle spokes that supported the wheels. They would be all right on road surfaces, but I could not see them lasting more than a few days loaded and going cross-country as we were going to be doing sooner or later. However, since we had nothing in the way of materials and tools around to provide them with springs, I decided not to say anything. There was no point in borrowing trouble.

We started out shortly after noon. The girl (who had showed up in time for breakfast, after all), Sunday, and I made up the advance guard, about fifty yards ahead of the rest. Behind us came Marie, walking, and the two carts, with Wendy riding one and the other loaded with food, water, and gear for all of us, plus the .22, which I had given to Marie. Three dogs pulled each cart, and all the rest moved in a tight and disciplined patrol around the carts and Marie.

The others travelled at a fair walking speed for cross-country; but they did not make as good time as Sunday, the girl, and I would have by ourselves, because they stopped more often for one reason or another—and often the reason was Wendy. The original three of us, up in front of them all, however, could pretty well ignore the problems of these others. It was almost like being off on our own again. Sunday, of course, did not mind the slower pace at all. It gave him that much more time to explore things. He and the dogs, I noticed, had already solved the problem of coexistence in typical animal fashion—by ignoring each other. Once, when Sunday lagged behind, one of the forward dogs trotted past him at a distance of less than ten feet and neither one so much as glanced at the other.

Several times I took advantage of being alone with the girl to try getting her to talk some more. But she was evidently not in the mood. Nor would she look at me.

"All right," I told her, at last. "You work it out by yourself, then."

I stepped out ahead, putting her from my mind and concentrating on scouting for our whole group. A few hours after we left Marie's place, I ran across a logging road. This continued on until it became a two-lane asphalt highway and we stayed on that until late afternoon when it ended abruptly. We kept pushing on, hoping to reach Gregory or Elton. We never did, though. After nearly three more hours of travelling without sighting another road or a town, we came to bluffs overlooking a river, a big river; easily a quarter of a mile across.

There was obviously no going farther that day. We set up camp on the bluff, and in the morning I went down to the river's edge to take a look at the situation.

The water was fresh and cold. The edge where I stood was overgrown with willows and seemed to drop off deeply, but a little farther downstream where the river made a bend there were a sandy beach and shallow water. I explored that far, accompanied

by Sunday and the girl. The current of the water seemed to be slower, going around the curve; and there was enough driftwood on the beach to make a raft. I went back to Marie on the bluff. She was making coffee and gave me a cup.

"So you want to cross the river," she said, after I had told her what we had seen.

I shrugged.

"We don't have to," I answered. "We can go upriver or downriver; and we may even run into a bridge, somewhere, and cross it. But summer isn't going to last forever; and the more I think about it, the more it seems to me that we ought to keep heading east. It's our best chance to find some large, civilized group that's survived the time storm."

So it was settled—more or less. I did some planning, out loud, with Marie and the girl listening. The dogs could swim, of course. So could Sunday and we adults—or, rather, we two adults and the one near-adult, the girl. Wendy, the equipment, and the supplies could be rafted over. Reducing the load to Wendy and our possessions meant we would need only a relatively small raft. I had decided to chain the logs of the raft together with the dog chains.

I had been looking forward to the evening—and Marie. However, Wendy was either coming down sick with something or upset by the travel, and Marie gave me to understand that as far as that night went she would be tied up with family matters. So as not to waste time, I took advantage of the long twilight to go down on the beach and start gathering the logs for the raft, chopping them to length with Marie's axe.

Sunday and the girl went down there with me. I built a fire and went on working by its light, even after sunset. We ended up making a separate camp down there. Just before I turned in for the night, something occurred to me.

"You know," I said to the girl, looking across the fire to where she sat with Sunday, "we left the lizards' raft in one hell of a hurry, that night. I remember pulling you through the water, but I don't really remember how well you can swim—or even if you can swim. Can you? Do you think you can make it across the river?"

I expected a nod or a shake of the head at the most. But to my surprise, she answered in words.

"I'm not going."

I stared at her.

"What do you mean—you're not going?" I exploded. "Do you

think you can stay here on this side of the river, alone? Get that thought out of your mind. You're going!"

She shook her head, looking not at me but at the fire.

I sat, staring at her, too angry for words. Then I took hold of my anger with both hands, so to speak, and tried to talk calmly.

"Look," I said, as reasonably as I knew how. "We've been together for some time, you and I and Sunday. But nothing lasts forever. You must have known that sooner or later we were going to be meeting other people and joining them, or they'd be joining us..."

I went on talking, calmly and persuasively, using all the arguments I had used to myself the day before and doing, I thought, a good job of it. It was only common sense I was telling her, and I pointed this out to the girl. Aside from her youth and sex, any single person stood a much reduced chance of survival. What would she do with herself? Practical matters aside, Sunday would miss her. For that matter, I would miss her, myself...

I was talking away quite earnestly, and even beginning to think that I was getting through to her, when she got up suddenly and walked away out of the circle of firelight, leaving me in mid-sentence.

I stared after her into the darkness. Something cold came in out of the night and sat down on my chest. For the first time it occurred to me that she could actually be meaning to do what she had just said she would..

§ § §

An hour after sunrise, Marie, Wendy, our equipment, supplies, dogs, and all were down on the beach watching me finish off the raft, watching and helping, as much as they could. Marie brought up the subject of the girl.

"I think," said Marie, looking over to where the girl sat on a log, stroking Sunday at her feet, "everybody should do their share."

"She's not going," I said.

Marie stared at me.

"She's not going?" Marie said. There was an odd note in her voice—a note which could have meant anything. I could not interpret it at all. "You don't mean that?"

"I don't mean it," I said. "She does."

"Oh?" said Marie. She looked over at the girl again. "It's her idea?"

"That's right."

Marie stood for a moment, watching the girl.

"No," Marie said, finally. "She'll go."

I did not say anything more. I concentrated on finishing the raft. When I was done we launched it and loaded it with the two bicycle carts and their contents. It floated well, a square of good-sized logs almost ten feet by ten feet; there was plenty of room on it for Wendy—though the little girl was pale as moonlight and clearly frightened to death of riding across the river on the rocking log surface.

While Marie coaxed and soothed the child, I took six of the dog-leash chains I had set aside while making the raft. Three of these I put around Sunday's neck to make a choke-collar for him. I fastened the second three to the first and looped them around a log too big for the leopard to drag. Then I went to the raft and picked up the .22 rifle and its box of shells.

"What are you doing?" Marie interrupted her efforts with Wendy to stare at me. "That's mine. You gave it to me."

"I'm taking it back," I said.

I walked away, not listening to what else she said. The girl had come to stand concernedly over Sunday and examine his chains—Sunday, himself, had hardly blinked when I put them on him. He lay basking in the sun. I walked up to the girl and shoved both rifle and shells into her hands.

"You can learn to shoot this," I said. "Keep the shells dry and use them only when you really need to. Whatever you do, make sure they're not dirty when you put them in the rifle. And make sure no dirt gets into the barrel of the rifle. If any does, take some string from your pack, and tie a clean patch of cloth on the end of it. Drop the string through the barrel and keep pulling the cloth through the barrel until it looks shiny from end to end, when you hold it up and look at the light through it, the way you've seen me do. Have you got that?"

She took the box and gun from me without a word.

"I'm leaving Sunday with you," I said. "Don't unchain him until we've been gone at least a day and a night. If I'm not around, I think he'll stick with you; and he'll be even more protection to you than the gun. Remember, winter's coming on in a few months. Try to find some place where you can settle in and be protected until it warms up again."

She looked at me.

"Well," I said. "Goodby."

She did not move or speak. I turned and went back to Marie.

Marie had Wendy on the raft and was already stripped down to a yellow, one-piece swim suit. She looked good in it, as I would have expected since the night before last. I had not stopped to think about such niceties myself. Now, out of tribute to her own bathing dress, I left my shorts on—a foolish bit of male modesty which I had not planned on earlier. But I had spare underclothing in my backpack, and I could hang the wet shorts outside the backpack to dry as I travelled, after we reached the other side.

I looked back once more at the girl and Sunday, and waved. Neither one responded, of course. I got into the cold river water, holding on to the raft along with Marie. The dogs took to the water on their own, after us; and we began the swim across.

As I said, the water was cold in spite of it being mid-summer. The current swept us downriver even more swiftly than I had expected. In spite of being a fairly strong swimmer, I was grateful to have the raft to cling to and sympathetic to the dogs who had no such thing. One of them did get the idea to try and climb up on the raft, but a sharp command from Marie made him drop back. The coldness of the water began to work its way into my bones, and I felt a chilling of purpose in me, to match the physical chill that was going all through me. I began to think that maybe I had done the wrong thing.

I turned my head to look back across the river to see if the girl and Sunday were still watching us. But we had drifted so far downstream in our crossing that the beach we had left was now around a bend, out of sight. Neither girl nor leopard was to be seen any more, and there was no way back. I turned my head forward again. The shore toward which we struggled was nearer now. We would reach it in a few minutes. I had been both wrong and right in what I had done, but there was no way back at all. I had to make the best of things as they were.

The chill of the cold water was turning me suddenly very sensible. I had been—well, I had been fond of the girl and Sunday. I had imagined coming to terms with this time-storm-ridden world on some basis that would include them. But that was out now. Instead, I had Marie and Wendy, for whom I had no particular affection but who now made up my household nonetheless. All right then, it would be with these two, instead of the other two that I would build. Meanwhile, there was still the storm, which continued to attract me like some beloved enemy.

Once we were across the river, I thought the thing to do would be to head south. It had been intriguing, the way those two mist-

LETTERS

Dear George:

How thoughtful of you to bring out the first issue of Isaac's magazine on *my* birthday (16 Dec)!

Best of luck —

Arthur C. Clarke
Colombo, Sri Lanka

Which birthday is that, Arthur? (But fear not. No one will ever find out it's your 59th from me.) —I.A.

Dear Mr. Scithers,

What a delightful Xmas present, an autographed copy of Dr. Asimov's new SF magazine! Surely this publication is bound for glory, what with its fine selection of stories, its pleasing layout, its generous fees and modest price. And hopefully the picture of the Good Doctor on the cover won't scare away too many readers.

I am honored to have been included in the very first issue; I must, however, bring to your attention a small mistake in the biographical blurb accompanying my story, "Kindertotenleider." You say, "... He studied music and art through high school and college..." While I did study music, my main interests were number theory, Eastern religions, literature, and psychology. The quote should have read, "... He attended the *High School of Music and Art*, ..." etc.

This is a special public school started by Fiorello LaGuardia during his tenure as mayor of New York. It allowed gifted children who couldn't afford private schools, the luxury of small classes and specialized education from some of the finest teachers in the city. Among its illustrious alumni are actress Diane Carroll, writer Erica Jong, pop-singer Laura Nyro, and NASA biochemist Paul Shapshak. "Music and Art," more than any other institution, stimulated my curiosity and my intellectual growth. The existence of the school has always been in jeopardy, now more than ever thanks to the city's budgetary crises. Hopefully this letter will serve some small part in keeping it alive.

All my best,

Jonathan Fast
New York NY

In the United States we have a child-centered economy so that blue jeans flourish, and rock music flourishes, and monster movies and battery-powered games—and everything but good schools. Why is that? —I.A.

Dear Dr. Isaac Asimov,

In Martin Gardner's puzzle I do note the fact that if only those statements given are followed, Ms. Hooker has hooked her last hook (rug). There is certainly nothing wrong with the mathematics, save for elegance I would have used an "I" for the inside and an "O" for the outside to save a mental step. The only problem I have is a practical one.

Have you ever tried to don a surgical glove while only touching *one* side of the glove? A nurse or another surgeon usually assists the first because they aren't easy to don. The holder holds both sides of the bottom of the gloves, inside and outside. So while the mathematics is successful the patient died.

However, I do have a solution. Using uncontaminated equipment, one carefully slits the gloves and glues them back together with a single twist. This will in effect create a Möbius glove which only has one side. Then it won't matter if the nurse uses two fingers to touch both apparent sides, since in fact each glove will only have one side. Trust me, it'll work.

Theoretically yours,

Wayne A. Kallunki
Clearwater FL

Puzzle-makers scorn the dictates of the practical, I'm afraid, else why would they be forever planting six trees in seventeen straight lines and cutting octagons into Maltese crosses? —I.A.



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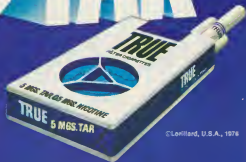
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